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Professional competencies of home economics teachers in the middle school

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INTRODUCTION

The educational program in the United States has experienced several organizational changes; one of these organizational changes has been the addition of middle schools. Designed as a transitional school between elementary and senior high school, the middle school was conceived around 1955 and its growth has been constant since that time. Various studies have documented the middle school's growth. Alexander et al. (1969), in a nation wide sample, identified 1101 middle schools of which only 15% had been established before 1960. Kealy (1971) repeated this study two years later and found the number of middle schools had doubled. Hence, today the middle school is an accepted and established member of the educational system.

The middle school received its impetus for growth from several factors. One was the failing of the junior high school to serve its intended purpose of serving the needs of youth in transition from childhood to adolescence and adulthood (McGlasson, 1973). Through the years the junior high evolved into a school with curriculum and programs which strongly resembled senior high schools. This development forced the junior high out of its transitional role and placed less mature adolescents into social and academic programs much too mature for their developmental level (Gerson, 1965). Therefore there was a need once again for a transitional school.

Another factor affecting middle school growth has been increased knowledge about the growth and maturation of early adolescents. Physical-sexual maturation begins at an earlier age now than it did ten years ago

(Eichhorn, 1973). Therefore the need for a transitional school occurs one year earlier than it did when the junior high was established. Dacus (1963), for example, found that sixth graders are more like seventh graders in the areas of social, emotional, and physical maturity than they are like children in elementary school. Hence, sixth grade is more logically placed in the middle school with seventh and eight grades than in the elementary school. From these ideas came the resolution of middle school educators to place sixth grade in the middle school with seventh and eighth and establish a new transitional school designed to meet needs of early adolescents.

Evidence suggests that the middle school may not be achieving its goals of providing a transitional school for early adolescents (Midjaas, 1973). Although many buildings may have the middle school label they are essentially junior high schools or mini-high school programs. The danger of this is that student's needs are obscured by the program rather than being revealed and aided by the program (McGlasson, 1973). Gatewood and Mills (1975) reported that in many cases there is little difference between middle schools and junior highs, the middle school programs being more senior high oriented than transitional oriented. The senior high oriented program emphasized subject matter content and preparation for a life vocation. This type of program does not meet the varying developmental needs of early adolescents and is inappropriate for a transitional school (McGlasson, 1973).

McGlasson (1973) and Gatewood and Mills (1975) believe the component missing in inappropriately functioning middle schools is a teacher pre-

pared specifically for the middle school. Stewart (1975) believes that the ultimate success or failure of the middle school may depend on whether teachers can present a student centered curriculum instead of a subject matter centered curriculum. Stewart does not believe that this can be achieved by teachers which currently staff today's middle school.

To add to the problem, teacher education programs have never developed to prepare teachers for the middle school. This is compounded by the fact that not only has middle school teacher preparation not developed but neither have junior high school teacher education programs developed because they have both been staffed largely by teachers prepared to teach in senior highs (McGlasson, 1973). This lack of properly prepared teachers is cited as a reason the junior high missed its goals and as a reason for the potential failure of the middle school. Further there is speculation that not only does the middle school teacher need special preparation but there may need to be variations because of the subject matter areas. For example, home economics and industrial education may differ from science and math teachers, who may differ from English and social studies teachers. Hence, the need for properly prepared teachers for the middle school seems an urgent concern if the middle school is to achieve its goals.

One group from which action is desired is state teacher education departments. Eight states have responded by adopting a middle school teacher certification. These certification programs seem to lack requirements which would cause teacher education programs to change in order to provide programs for middle school teacher preparation (Walter, 1977).

Even though many middle schools exist in all states, teacher education institutions in states without certification have done little toward developing preparation for middle school teachers. Krinsky and Pumerantz (1972) and Gatewood and Mills (1975) report that teacher education institutions have been slow in responding to the needs of the middle school and few institutions offer course work designed to prepare a special teacher with special competencies for the middle school.

Moreover the problem of teacher preparation for the middle school is complicated by the lack of research conducted to identify the special competencies middle school teachers need to possess. Many writers have speculated from their personal observations on competencies that are needed by middle school teachers (Georgiady & Romano, 1973; Curtis, 1972). Little has been done to delineate specific competencies for the various subject matter areas including the area of home economics. Therefore the purpose of this study is to identify those competencies which are unique to middle school teachers, in general, and specifically to home economics teachers in the middle school.

Specific objectives of this study were:

1. To identify professional competencies needed by middle school subject matter teachers as well as those needed by home economics middle school teachers.
2. To compare professional competencies needed by subject matter teachers and home economics teachers in the middle school as given by teacher educators, principals, subject matter middle school teachers and middle school home economics teachers.

3. To isolate competencies necessary for the middle school teacher from those necessary to all teachers.

The following definitions of terms were used throughout this study:

Middle School - A program of schooling between elementary and high school, including some of the grades from five through nine, which meet needs of emerging adolescents and allow them to move from elementary to senior high with maximum success.

Transescent - Individuals from ten to thirteen years old who are between childhood and adolescence. The individual is in a transitional state of growth and change in nearly all aspects of physical, social, emotional and mental life. This term is used interchangeably with early adolescent, emerging adolescent and preadolescent.

Competency - An attitude, behavior, skill or understanding demonstrated by a participant at a specified performance level. A competency is broad in scope (AHEA, 1974, p. 4).

Middle School Subject Matter Teacher - Teachers in a middle school who instruct in content areas other than home economics. Used interchangeably with middle school teachers in general.

REVIEW OF LITERATURE

Middle schools have been in the educational setting since the early 1960's. Research studies have been concerned with defining and numbering the middle school but little research has been directed toward teacher competencies or curriculum for the middle school. The present study was designed to identify professional competencies needed by subject matter teachers in the middle school as well as those needed by home economics middle school teachers and to isolate these competencies from those needed by all teachers. The review is presented in six sections: 1) middle school growth; 2) middle school's definition and purposes; 3) middle school problems; 4) teacher preparation for middle school teachers; 5) competency validation; and 6) middle school teacher competencies.

Middle School Growth

Middle schools first began to appear in the early 1960's. There is little doubt that the middle school is no longer fad but an established member of our educational system. Alexander et al. (1969) conducted a survey on a random sample of ten percent of the USOE Regions to identify existing middle schools. From this sample, 1101 middle schools were identified. Of these, only 4% had been established before 1955, and only 10.4% before 1960. In 1969 Kealy (1971) repeated the study done by Alexander et al. in 1968 and found 2,298 schools were identified by the same sampling techniques. In one year's time the number of middle schools doubled. Speculation by Alexander in 1974 suggests that the number would be quadrupled in the early 1970's.

Another sign of middle school growth is the number of state departments of education which officially recognize middle schools. Pumerantz (1969) reports in 1967-68 that only Connecticut had legislation defining middle school. Six years later George, McMillan, Malinka, and Pumerantz (1975) found that forty-seven states officially recognized middle schools. Mississippi, Ohio, and California did not have a legal definition for middle school, but had schools within their states that could be classified as middle schools.

State certification of teachers is seen as a necessity to future growth of the middle school. In 1969 Nebraska and Kentucky were the only states with an official certification for middle school teachers (Pumerantz, 1969). By 1975 eight states had a special certification for middle school teachers. They were: Colorado, Florida, Indiana, Kentucky, Nebraska, North Carolina, Minnesota, and West Virginia (George et al., 1975). Hence, the middle school as a separate educational entity appears to be well-established and study of its curriculum, organizations, and the teachers employed is appropriate.

Middle School: Definition and Purposes

Although the growth of the middle school is an established fact, what is happening inside the middle schools is not. Educators have been concerned with what the middle school should be and how the middle school is not meeting its potential.

Definitions

Departments of education and school districts define the middle school in several ways. The definition of a middle school varies from state to state and even from school to school. The middle school is frequently defined either by grade levels or by what the school hopes to achieve. The state departments of Florida, Kentucky, Colorado, and Minnesota define middle school in terms of grades it contains. Florida and Colorado define middle school as a school containing grades five to eight. Kentucky and Minnesota define middle school as a building with three or four consecutive grades between five and nine. Krinsky and Pumerantz (1972) define the middle school as a separate intermediate school that has combined one or more grades from upper elementary with one or more grades from lower secondary grades. This definition is very similar to grade level definitions given earlier.

Middle schools are also defined by the basic purpose of the school. The West Virginia Department of Education (1977) uses such a definition, as do authors Curtis (1972) and McGlasson (1973). Basically these definitions state that the middle school is a transitional school concerned with programs which meet needs of emerging adolescents and allow them to move from elementary to secondary education with maximum success.

The primary emphasis of middle school curriculum is the student. The student within the middle school will be approximately eleven to thirteen years old. There will be a combination of youths in late childhood and early adolescence. Because of the transitional nature of these youths Eichhorn (1966) coined the term "transescence" in 1966. Transescence is a

transitional stage of development for youth who differ from younger children in elementary and from older adolescents in high school.

The middle school was designed to be a transitional school and meet the needs of transescents. It is a transitional school in two senses. First the middle school was to be an educational middle step between the elementary, which is concerned with basic skills, common student learning and child centered curriculum and the senior high which is concerned with specialization, vocational preparation and subject matter mastery (Vars, 1973).

Secondly the middle school was instigated to serve the needs of youngsters who are themselves in a transitional stage emotionally, physically, socially, and mentally. The middle school was designed for the age characteristics of youths in transition from childhood to adolescence (Eichhorn, 1973).

Increased knowledge relative to puberty and social-psychological characteristics of boys and girls in late childhood and early adolescence has supported the need for the middle school movement. Physical-sexual maturation or puberty begins at an earlier age now than it did ten years ago. Because of this, the movement proposed to begin the transitional school one year earlier than had been done in the past (Eichhorn, 1973).

Social-psychological characteristics of students in these ages have been studied by Gatewood and Dacus. Gatewood (1973) points out that sixth graders are more similar in social-psychological characteristics to seventh graders than fifth graders. Dacus (1963) found that social, emotional and physical maturity and opposite sex choices of pupils in

grades five through ten indicated differences were least between pupils in grades six and seven. The reason for these changes seems to be that sixth graders are going through puberty while fifth graders are not (Eichhorn, 1968). Hence it is believed fifth graders will resemble other elementary children and sixth graders will resemble early adolescents found in the junior high school.

Because of the varied growth of transescents and the variance in growth from pupil to pupil, diversity is average. It is difficult if not impossible to devise large group instruction that will meet all individual needs (Gatewood & Dilg, 1975). From these ideas comes the resolution of middle school educators to place sixth grade in the middle school with seventh and eighth.

Purposes

What the middle school hopes to be can be exemplified by its goals. The middle school has several basic goals which seem to be the core of middle school education in many locations (Gatewood, 1973). They are:

1. Personal development of students.
2. Maintenance of skills established in elementary for continued learning.
3. Effective use of appropriate knowledge.

To facilitate implementation of the goals of the middle school, organizational structure has been changed. Some of these changes are individual progress reports, individualized instruction programs, exploratory activities in subject matter areas (Gatewood, 1973); flexible grouping of students (Gatewood & Dilg, 1975); flexible use of staff, facilities

and time (Davis, 1972); team teaching, interdisciplinary instruction, and small group instruction (Gatewood & Dilg, 1975). While there are signs of growth and educators call for renewed dedication to the goals of the middle school, there is evidence that the middle school is not living up to its predetermined goals.

Middle School Problems

The founders of the middle school movement did not have an original idea with their transitional school. The idea of a transitional school designed specifically to meet the needs of emerging adolescents had been the core of the earlier junior high movement. What the founders of the middle school movement hoped to achieve was a rededication to a transitional school, adjusting for earlier maturation of children.

Criticism of junior highs in the 1960's centered around the fact that these schools had lost their transitional orientation and had become mini-high schools. Examples of activities which contribute to the high school orientation are departmentalized instruction, interscholastic competition, and marching bands.

If junior highs have all of the programs and procedures of a high school, then they are not transitional schools. The student leaves elementary and goes immediately into a high school oriented program.

The middle school hoped to recapture the original concept of function for the junior high school by preventing the academic and social pattern of the high school from being forced down on less mature adolescents (Gerson, 1965). By moving the ninth grade to the high school and the

sixth grade to the middle school, it was believed that the transitional nature of the earlier junior high movement could be recaptured.

Even though the founders of the middle school movement rededicated themselves to providing a transitional school, there is evidence that the middle school may be following the way of the junior high school (Midjaas, 1973; McGlasson, 1973). For some schools, the transition from junior high to middle school has demanded no more than the time required to put up a new sign. Although the middle school is dedicated to personal-individualized-exploratory education for transescents, many middle schools have the traditional curriculum of a junior high or a senior high school. This traditional curriculum implies subject matter centered content, departmentalized teaching, large group instruction, and rather sophisticated, skill oriented extracurricular activities. In many cases the transformed middle school has surged out to achieve something new and different, but when crisis situations arise or enthusiasm waned, the traditional form of education was readopted.

Little difference between middle schools and junior high schools is frequently observed. Gatewood and Mills (1975) comment that some middle schools have little uniqueness from junior highs. This development appears to be the result of the fact that middle schools are administered like high schools and are taught by teachers unprepared for middle school teaching.

Support for the belief was found by Marshall (1970) who studied forty-six middle school principals to see if there was a difference in the way elementary oriented and secondary oriented principals administered

their middle school programs. Programs were administered in the same way irrespective of preparation and showed little evidence that they were administered specifically to fulfill the needs of transescents.

McGlasson (1973) and Gatewood and Mills (1975) believe the component missing in these schools is instruction for personnel specifically designed for the middle school's purposes. McGlasson observed that instructors continue to be largely elementary or secondary teachers. Gatewood and Mills (1975) continue that as long as middle schools are staffed by teachers and principals unprepared for the middle school they will continue to miss the curriculum and instructional goals of the middle school.

Stewart (1975) believes the ultimate success or failure of the middle school hinges upon whether it can be student centered instead of subject matter centered in its approach to education. The middle school teacher should be able to mold subject matter to meet students' needs.

While there is agreement that properly prepared teachers are essential to middle school success it is worth noting that the lack of preparation is cited as the reason the junior high missed its goal. McGlasson (1973) indicated that the junior high was never able to develop a program of teacher preparation designed for that level. Teachers in the junior high were trained for elementary or senior high schools. Senior high teachers are seen as having a strong subject matter orientation but with little understanding of individual student interests. Elementary teachers are praised for their student orientation but lack depth in a subject matter area (McGlasson, 1973).

Blackburn (1973) discusses the kind of teacher that was needed for junior high teaching. The junior high needed teachers who understood the goals of the school, desired to teach in the junior high, cared about helping students develop healthy self-concepts, cared about understanding pupils, and cared about making content student centered and meaningful. In every respect these are qualities that are said to be needed by middle school teachers. Hence the call for action by teacher educators and supervisors responsible for state certification to insure adequate preparation for middle school teachers and to assist with the attainment of the goals of the middle school.

Teacher Preparation for Middle School Teachers

To facilitate the goals of the middle school, teachers need to be specifically prepared. Necessary preparation includes mini-course organization, exploratory curriculum concepts, deemphasis of subject matter and ability to work in various staffing arrangements including team teaching. The teacher must be prepared to do these tasks and currently the teacher has not been able to function accordingly. Preparation needs to change to provide teachers with special skills to function in the middle school. McGlasson and Gatewood and Mills succinctly delineated the problem when they said

> At any rate the problem of teacher preparation remains and perhaps one of the greatest possible contributions of the middle school lies in this field (McGlasson, 1973, p. 25).

> The middle school concept has not and never will be successfully achieved unless future middle school teachers are markedly different from their present day counterparts (Gatewood & Mills, 1975, p. 258).

Three ways to accomplish change in teacher preparation are through state certification requirements and preservice and inservice activities.

George et al. (1975) believe a large part of the problem in preparation of middle school teachers lies in state certification. State certification will be necessary before teacher education will adapt itself to needs of the middle school. Middle school preservice programs are dependent on certification. George et al. (1975) believe that teacher education programs will not develop unless state certification is first adopted.

Walter (1977) conducted a survey of the state departments of education which have middle school teacher certification. The eight states are: Colorado, Indiana, Minnesota, Nebraska, North Carolina, West Virginia, Kentucky, and Florida. These seem likely candidates for well-developed teacher education programs in institutions. Of these eight states, one has no institution with a teacher education program to prepare middle school teachers, two have institutions with teacher education programs but no state guidelines for these programs and only four of the eight states have state guidelines with institutions offering the programs. Also at least two do not appear to require any special professional education for the middle school teacher. States without definite guidelines may not be forcing any changes in their teacher education programs. Hence, although teacher certification would appear necessary for more adequate preservice education for the middle school teacher, it is not necessarily a prerequisite. There are those who believe that

certification does not precede improvement in preparation. They believe that teacher education itself must bear the total responsibility for change.

Gatewood and Dilg (1975) place responsibility on teacher education institutions to implement the desired change. It seems reasonable that there ought to be teacher education institutions in states where there are large numbers of middle schools. However, when one examines the number of preparation programs in comparison to the number of middle schools, it appears that this inference is not true. Krinsky and Pumerantz (1972) and Gatewood and Mills (1975) both report that teacher education institutions have been slow to respond to the needs of middle schools. Krinsky and Pumerantz (1972) reported that only 37 of 160 responding institutions or 23% had some type of preservice for middle school teaching. Further, in their investigation they discovered states with a large number of middle schools, but few state institutions that prepared middle school teachers. For example, Texas, Illinois, and California together had a total of 525 middle schools and only one institution in each state with a middle school teacher education curriculum. Gatewood and Mills (1975) surveyed 833 institutions of the American Association of College Teacher Education. Of the data producing sample of 639, only 22.6% had a formal program for preservice preparation of teachers.

Three institutions noteworthy for their middle school preparation are Gordon College in Massachusetts, the University of Wyoming, and the University of Georgia. These three institutions have included similar components as they have sought to better prepare teachers for the middle

school. One area of similarity is program objectives. Common objectives, for example, are to prepare teachers who will teach student centered rather than subject matter centered curriculum. Students in these preservice programs are also made aware of the developmental changes of preadolescents. Course work in such programs includes history, philosophy, and organization of the middle school; the nature of preadolescents; methods; curriculum in the middle school; and have a full practicum in a middle school.

A third alternative to middle school teacher preparation is to use inservice activities. Inservice education is a method of preparing teachers after they have completed their preservice education and are in the field teaching. Lawrence and DeNovellis (1974) report work done in Florida on the development of twenty competencies for the middle school teacher. Seventeen modules have been developed based on these competencies for the inservice preparation of teachers who are teaching in the middle school. The problem remains that while inservice is important it should be designed to build on preservice, not equip teachers for teaching after their preservice.

Teacher education programs and state teacher certification are believed necessary to insure the preparation of middle school teachers. Hence, teacher education and certification are seen as keys to providing middle schools with teachers. Two prerequisites to changes in teacher preparation are needed: 1) adequate number of middle schools to provide sites for preservice experiences of teacher trainees; and 2) an adequate

teacher education certification pattern throughout the states (George et al., 1975). What remains a question is the special competencies middle school teachers need to possess.

Validation of Teacher Competencies

A survey of the literature on delineation of competencies which facilitate pupil growth shows two major approaches for validation. The first approach involves the identification of teacher competencies which appear related to pupil performance (Soar, 1977) and the second approach involves expert judgment to identify teacher behaviors which presumably make a difference in pupil performance.

The first approach encompasses many problems in connection with the accurate measurement of pupil gain. A problem in this method is controlling for effects other than the teacher in pupil gain such as parental expectation, prior pupil achievement, socio-economic status of family and general intellectual quality of pupils' home life (Borich & Fenton, 1977). With factors extrinsic and intrinsic to school life confounding teacher effects the use of pupil gain scores for validation of teacher competencies seems doubtful.

Other problems with this approach are the questions underlying the measurement of pupil gain. One of these questions is the unreliability of differences between pupil pre- and post-test achievement. Soar (1977) reports a nonlinear relationship between pupils initial score and the gain they show as low scorers gain little, moderate scorers gain greatly, and high scorers gain little. Other factors restricting the measurement of

pupil gain are changes which take more than one school year to achieve in students, unsuitability of standardized tests for measuring all desired objectives, and the unstableness of teacher effects on pupils over time (Borich & Fenton, 1977). Another issue in the use of pupil gain for validation of competencies is the problem of measuring higher level objectives. While measurement specialists admit problems with accurately measuring lower level objectives the difficulties increase markedly in measuring higher level objectives. Hence, it is easier to concentrate validation efforts on the basis of lower order objectives since methods to measure higher order objectives are more complex.

This approach is confounded by the difficulty of assessing the quality of teaching performance. Studies of teacher's classroom performance, as determined by observations, show that teachers vary more from class to class than from teacher to teacher (Caputo, 1975; Shavelson & Dempsey-Atwood, 1976). These studies raise basic questions as to what measure and how many observations are necessary to establish teacher performance.

For these reasons many researchers have abandoned the pupil performance approach and adopted identification of teacher behaviors based on expert opinion. It is suggested that what the teacher does in a classroom is more pertinent to competence than pupil growth (Soar, 1977).

> The teacher appears to be more fairly evaluated if the judgment is made on what he does rather than on outcome of what he does. The first is under his control and the second is not (Soar, 1977, p. 168).

Validation by expert opinion actually involves two steps in the identification of teacher behaviors or competencies. The first stage involves identification of competencies by experts in the field and having

judgments on importance made. The second stage involves seeing whether these behaviors can be observed in the classroom and whether these behaviors differentiate between teachers. The judgment of teachers based on the identified behaviors could be made by external observers (Glass, 1977). It is the identification of behaviors essential to middle school teaching as established by expert judgment which is the purpose of this study.

Competencies for the Middle School Teacher

Little research has been attempted which seeks to identify the special competencies of the middle school teacher. Twenty competencies appropriate for inservice education of middle school teachers have been identified by educators in Florida (University of Florida, 1972). These were developed by middle school educators who were called together for the purpose of writing generic competencies for inservice activities of middle school teachers. It is possible that preservice competencies may vary from these and that these may be inappropriate to preservice preparation.

Many writers speculate, from their personal observation, on competencies that are needed by middle school teachers. A few examples of these competencies are that the middle school teacher needs to be able to 1) provide exploratory studies (Georgiady & Romano, 1973), 2) guide students in individualized instruction (McGlasson, 1973), and 3) participate in various staffing arrangements (Georgiady & Romano, 1973). These competencies are basically an integration of transescent characteristics with basic learning theories.

The twenty inservice competencies from Florida (University of Florida, 1972) are presented in Table 1 in comparison with competencies other authors have presented in the literature. Inspection of the sources for the competencies cited in the table show that they have not been based on research. Further, a study of the competencies shows them to be all encompassing and therefore difficult to implement in a teacher education program. Little has been done to delineate specific competencies for the various subject matter areas, much less competencies for the area of home economics. Therefore, the purpose of this study is to delineate competencies for the middle school teacher and to see if there is any uniqueness in the subject matter areas of home economics.

In working with these competencies and the need for improved preparation for the middle school teacher, Margaret Mead expresses the concern succinctly. She saw adolescents as ". . . more unlike each other than they have been before or ever will be again in the course of their lives. If a lively sum of these differences can be maintained and strengthened among those who plan for them and teach them--the whole school system and the adolescents of the coming generation will be the gainers" (Mead, 1969, p. 10).

Table 1. Competencies suggested for middle school teachers

Florida's competency statements	Competency statements from other sources	
The middle school teacher . . .		
shows awareness of own behavior patterns and how they are influenced by situations and by his beliefs; awareness of personality characteristics; acceptance of a variety of behavior in others that differ from their own.	Curtis (1972) The middle school teacher needs to possess self-awareness.	
Interacts constructively with others and with transescents; shows regard for persons; is approachable; responsive and supportive.	Harvey (1970) This is anti-authority age for students. Teachers need to earn respect from students. Gatewood & Dilg (1975) *Need staff members who provide* environment where child, not program is important.	Baldwin (1973) The middle school teacher should be accomplished in interpersonal relations.
Understands the career development process of transescent students and organizes teaching according to that process.	NONE	

Table 1. (Continued)

Florida's competency statements	Competency statements from other sources	
Understands and applies various theories to teaching-learning process, analyzes the learning pattern of individual student, prescribes for these, and evaluates results.	Curtis (1972) The teacher must be able to use diagnostic tools and facilitate learning. McGlasson (1973) The teacher uses exploration, mini-courses, and learning packets.	Baldwin (1973) The teacher engages students in diagnostic learning.
Incorporate knowledge of group dynamics in teaching and helps students understand group process; group decision making, leadership skills and peer influence.	NONE	
Promotes positive relationship between the school and the community, between the teacher and parents and between various subcultures in the school.	NONE	
Organizes curriculum plans to opportunities appropriate to the middle school (those that facilitate the developmental tasks of transescence) and are responsive to community problems.	Midjaas (1973) Teacher will need to be able to organize and offer exploratory studies.	Curtis (1972) Teacher must be able to determine objectives for students.

Table 1. (Continued)

Florida's competency statements	Competency statements from other sources	
	McGlasson (1973) Teacher uses exploratory courses, mini-courses and learning packets. Baldwin (1973) Teacher can implement child centered approach in curriculum.	Georgiady & Romano (1973) Involve students in continuous progress learning.
Uses appropriate procedures of managing an instructional program-designing, conducting, evaluating and revising curriculum and instruction.	Georgiady & Romano (1973) Teacher is familiar with evaluation of all types.	
Make effective presentations using appropriate media.	Georgiady & Romano (1973) Teacher is able to provide a multi-material approach to learning.	Curtis (1972) Teacher specializes in use of resource materials.
Deals effectively with unusual classroom problems.	Harvey (1970) Teacher needs to be able to distinguish the difference between misbehavior and what is normal for children of this age.	

Table 1. (Continued)

Florida's competency statements	Competency statements from other sources	
Counsels individual students, promoting self-direction through indirect guidance.	Harvey (1970) Uses subject matter as a tool to accomplish individuality.	Georgiady & Romano (1973) Provides guidance to students.
Helps students to consider alternative values and to develop personal workable valuing systems.	NONE	
Teaches students techniques of problem solving.	NONE	
Provides opportunities and guidance to help students become independent (define own goals and problems, identify resources, and evaluate outcomes).	McGlasson (1973) Teacher engages students in independent study and individualized instruction. Georgiady & Romano (1973) Teacher allows planned gradualism (gradual independence of students). Teacher provides independent study for students.	Baldwin (1973) Teacher provides approaches to independent study.
Designs and conducts group activities according to kinds of learning that are facilitated by different groupings.	NONE	

Table 1. (Continued)

Florida's competency statements	Competency statements from other sources	
Has skills of working in cooperative teaching situation with other teachers, paraprofessionals and resource people.	McGlasson (1973) Teacher can participate in a faculty which has flexible use of personnel and a greater emphasis on methods and media. Baldwin (1973) Teacher possesses human relation skills for team teaching.	Georgiady & Romano (1973) Teacher can participate in team teaching.
Accepts responsibility of multi-disciplinary instruction; plans thematic and coordinated studies with other teachers and assists them in teaching subjects outside of his own area of specialization.	McGlasson (1973) Teacher participates in various staffing arrangements, including team teaching.	

Table 1. (Continued)

	Competencies which consider all three of these statements	Competencies for each specific developmental area
Understands the intellectual development process of transescent students and organizes his teaching according to that process. Understands the physical development process of transescent students and organizes his teaching according to that process. Understands socio-emotional development process of transescent student and organizes his teaching according to that process.	Georgiady & Romano (1973) Can instruct in basic learning skills. Provide exploratory studies. --- Gatewood & Dilg (1975) Recognizes and understands student needs, interests, background, motivations, goals as well as stresses, strains, frustrations, and fears. Strive to understand the student by learning of transescent physical, mental, and social development. --- Curtis (1972) Recognition of variability among adolescents.	Intellectual (Harvey, 1970) Accepts wide range of mental ability. Accepts irregular mental growth between girls and boys. --- Johnson (1965) Conducts learning with concrete operations. Involve students in writing definitions, identify assumptions, see cause and effect, and learn to generalize. --- Physical (Midjaas, 1973) Understands the appropriateness of intramural and individual athletics. --- Socio-emotional (Baldwin, 1973) Understands the psychology of adolescence.

METHOD OF PROCEDURE

The increase in the number of middle schools over the past decade suggests that it appears to be a somewhat permanent educational institution. While middle schools exist there is evidence to indicate that they are not fulfilling their purpose. One of the main reasons cited for this failure is the lack of teachers prepared to teach in middle schools. A part of this problem is the lack of information about the competencies needed by middle school teachers and this is the purpose of the study. Specific objectives follow.

1. To identify professional competencies needed by middle school subject matter teachers as well as those needed by home economics middle school teachers.
2. To compare professional competencies needed by subject matter teachers and home economics teachers in the middle school as given by teacher educators, principals, subject matter middle school teachers and home economics teachers.
3. To isolate competencies necessary for the middle school teacher from those necessary for all teachers.

Sampling Methods

Two samples were used in this study. The first was a deliberate sample which consisted of experts who suggested competencies for middle school teachers. The second was a deliberate sample composed of teacher educators, principals/administrators, general middle school classroom

teachers and middle school home economics teachers who were used to validate the competencies.

Obtainment of experts for competency identification

The first sample was composed of teacher educators who were believed to be leaders of the middle school movement. The initial teacher educators were found by surveying the literature to identify educators who wrote about and/or were involved in research dealing with the middle school. Nineteen leaders were identified.

These individuals were selected because they lead the middle school movement through their research, writing, teaching and leadership roles. Their participation in teaching at the college level singles them out as individuals familiar with the ideal middle school. These leaders participated in the study in two ways. First, they were asked to identify behaviors unique to middle school teachers. Second, they identified other qualified middle school educators who could participate in validation of competencies.

Their first contribution was that of identifying behaviors or competencies unique to the middle school teacher. They were mailed a form with five categories of teaching behavior. Each was asked to identify teaching behaviors within these categories which they believed were unique to middle school teaching. The correspondence that was mailed to middle school leaders appears in Appendix A. Thirteen of the nineteen teacher educators responded and supplied behaviors which they believed were unique to middle school teachers. These statements were used further in instrument development.

This sample also contributed names of other qualified middle school educators who could participate as judges of competency statements.

Obtainment of judges for competency validation

A second deliberate sample composed of teacher educators, administrators/principals, middle school teachers and middle school home economics teachers served as judges in competency validation. Identification of this sample was done in three ways.

When teacher educators were originally contacted they were asked to provide names of other qualified middle school educators. Teacher educators were sent a form which requested names of people in higher education, teacher education and administration. The correspondence which requested this information appears in Appendix A.

Fifteen of nineteen leaders responded to this request. Several of the names submitted were duplicated one or more times. Thirty-eight usable names were submitted. Of these, three were classroom teachers, fifteen were principals, and twenty were in higher education.

A second source of sample participants was from the departments of education in the eight states which presently have middle school teacher certification. An administrator of teacher education in Iowa was able to supply other teacher education administrator's names in these eight states. Each of these eight state departments of education were then contacted by means of a letter which appears in Appendix B. Each state department administrator was requested to supply the names of effective middle schools within the state. Six states contributed the names of sixteen effective middle schools and their principals names.

These principals were then used as a third source of sample participants. It was believed that principals who are currently administering effective middle school programs are also knowledgeable of effective teachers in the middle school. Nineteen principals were contacted using the correspondence which appears in Appendix C. In the correspondence each was informed of the procedure by which they had been identified and was asked to identify effective teachers, in general, and home economics teachers, specifically, as well as to be a participant in the study later.

Approximately two weeks later a follow-up letter was sent to those principals who had not responded (Appendix C). Fourteen of the nineteen principals agreed to participate in the study and also supplied names of middle school teachers. Forty-one general subject matter teachers and twenty-two home economics teachers were identified. One principal supplied names of educators who were in teacher education or who were principals.

Identification of the sample was done using a deliberate sampling procedure rather than a random sampling procedure because middle schools frequently have been established in name only. The intent of the study was to have competencies judged by individuals knowledgeable about the middle school and therefore selection of respondents judged competent seemed appropriate. The sample for validation of competencies included a total of 136 educators:

25 in teacher education

39 principals or administrators

50 general subject matter middle school teachers

22 home economics middle school teachers

Instrument Development

The questionnaire used in this study was developed in two phases. The open ended instrument (Appendix A) was used first to obtain suggested competencies unique to middle school teaching. Then a structured questionnaire which contained these competencies was used for judgmental validation of competencies.

Preliminary competency identification

An open ended device was developed around the broad teaching behaviors believed unique and essential to middle school teaching. They were:

types of teaching techniques

ways to achieve positive interpersonal relations

methods for organized class management

motivational techniques for early adolescents

faculty and community functions

These five categories are the result of research conducted by Manatt, Palmer, and Hidlebaugh (1976). The identified behaviors discriminated between the performance of good and mediocre teachers. Students, peers and administrators judged the items and 94 items were found to be significant in separating teacher performance. These 94 were grouped into the five classifications listed earlier.

Open ended forms were returned from 13 of the leaders but one was returned incomplete. Competency statements supplied by leaders show many similarities to those in the literature. This lends justification for the appropriateness of those competencies provided by the leaders.

Development of Structured Questionnaire

Preliminary development of competency statements

The response contributed by the leaders were combined into one list. Many ideas were duplicated and these were eliminated or combined with other appropriate statements. Competencies from several other sources were also arranged according to these five categories and combined with statements supplied by the leaders. The other sources used were:

Middle school teacher competencies (Gatewood, 1977)

Gordon College Middle School Program (Gavin, 1977)

A Programmatic Definition for Middle Schools in West Virginia (West Virginia Department of Education, 1977)

Professional intermediate competencies (North Carolina State Department of Education, 1977)

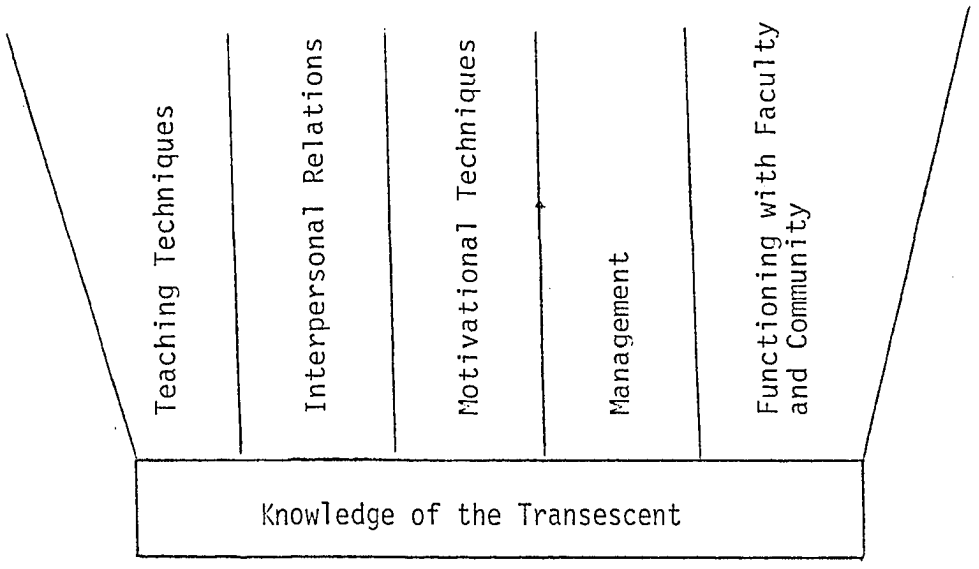
Florida Middle School Competencies (University of Florida, 1972)

Upon arranging these into the five categories and combining statements with similar thoughts another category of teacher behavior was evident. Within each category was one or two statements which related specifically to the transescent or middle school philosophy. It became evident that a basic understanding of the middle school and transescents underlies all teacher behaviors. These statements were removed from the five categories and were grouped into a new sixth category. This category "Knowledge of the Transescent" is seen as basic to the other categories. Table 2 illustrates this conceptualization.

Preliminary development of structured questionnaire

The statements of teacher behaviors were then formed into competency statements. With the help of a curriculum specialist all statements were

Table 2. Categories of middle school teaching behaviors



reviewed and revised. A final total of fifty-nine competency statements were refined for the structured questionnaire. Statements were randomly ordered in the questionnaire to insure that statements were no longer listed in categories.

The questionnaire was designed so that competency statements could be judgmentally validated by each participant as to whether it was a behavior of effective middle school teachers. The questionnaire included three columns for which a rating was made. Participants were to judge to what degree the competency was needed by ALL teachers (elementary, middle and senior high), by MIDdle school teachers, and by HEC-home economics teachers in the middle school. In each column participants could respond with any number from 1 to 99. Numbers from 51 to 99 indicated that the

competency is essential. The closer to 99 the rating, the more essential was the competency judged. Numbers from 1 to 49 indicated it was non-essential. The closer the rating was to 1 the more nonessential it was. A score of 50 could be used to indicate uncertainty of the competency.

The response pattern of 1-99 was selected because of the weighting which occurred at the ends of this scale. The weighting at the ends gave more variance in the scores and therefore a greater reliability was likely (Warren, Klonglan, and Sabrie, 1969).

This preliminary form of the questionnaire was reviewed by a curriculum specialist, two evaluation specialists, and a psychometric specialist. No changes were made in the preliminary form of the questionnaire.

Pretest of the preliminary questionnaire

Usability of the instrument was established by having two graduate professional education classes review the instrument. Respondents were asked to assess clarity of direction, time to respond, ease of using the rating scale, ease of making judgments, and clarity of items. A letter of transmittal accompanied the pretest questionnaire (Appendix D). It was indicated that the questionnaire was to be used with teachers and principals of the middle school to determine competencies necessary for all subject matter teachers and especially home economics teachers in the middle school.

Comments from the reaction sheets (Appendix D) resulted in several changes which would facilitate participant response on the questionnaire. Wording of the directions was changed so that participants would use a wider range of numbers rather than relying on only 1 or 99 for ratings.

Several respondents indicated they were unsure of the meaning of a 50 rating. Since these responses generally came from individuals who had not spent a great deal of time filling out the questionnaire, it was believed the purpose of the 50 or uncertain rating would have been understood if participants would have taken a few more minutes to read the directions carefully. Therefore no changes were made in the directions.

Item seventeen was refined so that large group instruction and small group instruction were more clearly defined. The wording in item nineteen was also changed so that more nontechnical terminology was used. One item (22) was deleted because it duplicated item 47. All other items on the instrument were readable by the participants and appeared to be usable with a group of experienced educators.

The grid lines on the rating columns were made darker to make column allignment easier to see. Several changes were made in the demographic data sheet in an attempt to supply more accurate and pertinent information about the sample.

Respondents were asked to record the amount of time it took them to complete the questionnaire. Reaction sheet answers indicated that participants took about 45 minutes to complete the questionnaire.

The device was typed in final form and produced in a reduced form (Appendix E). When folded in half lengthwise the questionnaire fitted into a business envelope without further folding.

Collection of Data

The sample of 136 was divided into two groups. The first was the group of 29 educators previously contacted who had agreed to participate in the study. They were mailed a questionnaire and a letter which re-familiarized them with the project, a reminder of their commitment to participate, and the questionnaire. This correspondence appears in Appendix F.

Participants who had been recommended by other educators were mailed a questionnaire and a transmittal letter (Appendix F). Included in this letter was a mention of the individual who had recommended them. A stamped addressed envelope was provided for questionnaire return.

After two weeks time 61 of the 136 sample members had responded. One was returned because of incorrect address. One response to the first mailing was a letter which indicated the participant lacked time to complete the questionnaire.

First follow-up

The 75 remaining members of the sample were mailed a post card which reminded them of the questionnaire and the need for their response. This mailing appears in Appendix G. Ten usable questionnaires were returned after the first follow-up. One questionnaire was returned partially completed.

Second follow-up

The second follow-up was a combination of post cards and phone calls. It occurred two weeks after the first follow-up. All home economics teachers were telephoned because of the limited sample number. Each was

encouraged to complete the questionnaire as soon as possible. One teacher said she had completed the questionnaire and mailed it but it was not received.

A combination of several respondents in four middle schools were also called. Calls were made to the principal who was urged to encourage all teachers who were sample members to respond.

The remaining members of the sample were sent post cards. Those receiving post cards were asked to return one portion of the card and respond to one of the following items: 1) the date they mailed the questionnaire, 2) the date they planned to complete the questionnaire, or 3) that they had misplaced their questionnaire and needed another. This post card appears in Appendix H.

Fourteen of the forty post cards were returned. Three were returned due to incorrect address. The correct addresses were located and three new communications were mailed out. Six cards indicated the person had already mailed the questionnaire. Five members had misplaced their questionnaire and were mailed an additional questionnaire. Subsequently thirteen more questionnaires were returned as a result of the second follow-up.

Third follow-up

A third follow-up was mailed to 40 sample members approximately three weeks after the second follow-up. The third follow-up involved a letter emphasizing their importance in the study and a post card for them to return (Appendix I). The post card requested a response to one of the following concerns: 1) when they had returned the questionnaire, 2) when

they planned to return the questionnaire, 3) that they had lost the questionnaire, or 4) that they would be unable to complete the questionnaire.

Nine post cards were returned. Two individuals said they had returned their questionnaires but they were not received. Three commented that they would be unable to return the questionnaire.

The three home economics teachers who had not responded at this time were not sent the post card. They were sent the letter, another questionnaire and a personal note encouraging them to participate. One of these individuals returned their questionnaire at this time.

Fourteen questionnaires in all were returned after the third follow-up.

Because one person in the initial invited sample had an incorrect address and the correct address could not be obtained the final invited sample was considered to be 135. The accepting sample was 104 and the data producing sample was 98. Responses in each of the subgroups are shown in Table 3.

Table 3. Response in sample subgroups

Sample group	Invited sample	Accepting sample	Data producing sample	Percentage of invited sample
Teacher education	25	22	21	84%
Principals/ administrators	38	32	31	83%
General teachers	50	31	30	60%
Home economics teachers	22	19	16	73%
Total	135	104	98	72%

Analysis of Data

Questionnaires were assigned identification numbers by which their membership in subsample groups could be identified. Each received a three digit number, the first of which indicated the sample group of the respondent. The four groups and their identification numbers were: 100's for teacher educators; 200's for principal/administrators; 300's for middle school teachers in general; and 400's for middle school home economics teachers. The demographic data were coded according to the coding plan in Appendix K.

A frequency count was tallied from the demographic data supplied by respondents. The types of demographic data were: sex, educational preparation, middle school experience, public school experience, and participation in special middle school educational programs.

The 99 point response pattern used with the competency statements were transformed to normal deviates, that is, 99 was transformed to 466, 50 to 233, and 1 to 0. Converting scores to normal deviates weights the ends of the scale, creating greater variance and causing easier identification of clusters.

Cluster analysis

Four sets of item-item correlation matrices based on judgments of competencies for all teachers (ALL), middle school teachers (MID), and home economics middle school teachers (HEC) were calculated using the transformed scores. The four sets were computed using the following sample groups:

teacher educators

principal/administrators

subject matter teachers in the middle school (excluding home economics teachers)

home economics teachers in the middle school

Hence, a total of 12 within group correlation matrices were calculated. Three 58 x 58 pooled within group matrices were also computed pooling the above subgroups. The three matrices were based on the three types of judgments, i.e., ALL, MID, HEC.

In the calculation of the matrices, items were reordered from questionnaire format into the major categories by which they were written. For example, all items from the category "Knowledge of the Transescent" were listed together and became the first 10 variables in the analysis.

Identification of clusters

Each of the 12 within group matrices as well as the three pooled within group matrices was inspected to determine clusters of items. Clusters were formed using the criterion of a correlation coefficient of >0.42.

For each of the three judgments of competencies needed, clusters of items from the four within group matrices were compared with the pooled within group matrix to determine sameness of clusters. For example, using the judgment of competencies needed by the middle school home economics teacher, clusters were formed from matrices based on teacher educators, principals, teachers in general and home economics teachers and from the associated pooled within group matrix. Clusters were compared from the

five matrices to determine which were general clusters for all. This was repeated for middle school teachers in general and for all teachers.

Sameness of clusters among the within group matrices and the associated pooled within group matrix was necessary in order to justify the use of the cluster for each sample group. Sameness of cluster organization suggested that each sample group was responding in similar ways.

Identification of high mean clusters

Once clusters were formed, items within the clusters with the highest means were identified. Items in the cluster with the highest means were identified by arraying the overall mean of items from high to low and inspecting the array for a natural break in the mean scores.

Reliability

Reliability of clusters was calculated using an alpha coefficient. The alpha coefficient is a method of estimating the internal consistency of the cluster following one administration of the questionnaire.

Identification of independent items

Those items with high mean scores (generally greater than 425) which did not fall into the clusters were identified. Because these items had high means it was believed they were important and were studied independently from the clusters.

Analysis of variance

One way analyses of variance were computed to study whether mean scores of clusters differed by respondent type for each judgment area. Sources of variance were teacher educators, principal/administrator,

middle school teachers in general, and middle school home economics teachers. A one way ANOV was also computed for the high mean item clusters in each judgment area using type of respondent as the source of variance.

Independent items with high mean scores which did not fall into a cluster were also analyzed using a one way analysis of variance. Sources of variance were again the four types of respondents.

Kendall's W

Kendall's W was computed to study whether ranking items by respondent group differed for each judgment area. Two sets of Kendall's W were calculated for each judgment area. The first was using high mean items in the cluster. The second was using high mean items from the total set of 58 competencies.

In calculating Kendall's W, items were first ordered from high to low on the basis of the overall means. The items with top mean scores were selected for this analysis by inspecting the array for a natural break. This resulted in 10-20 items being used in each of the judgment areas.

Item means, from each respondent group, were arranged from high to low and rank orders assigned. Rank orders were transferred to the matrix associated with the calculation Kendall's W. The matrix is shown in Appendix L. The formula used for computation was:

$$W = \frac{S}{\frac{1}{12} k^2 (N^3 - N)}$$

s = sum of squares for ranking
k = number of sets of judges or rankings
N = number of objects or individuals ranked

Significance of Kendall's W when more than 7 items were judged is computed using the chi square distribution. Kendall's W is transformed to chi square using the following formula:

$= k (N - 1)W$

d.f. = N - 1, = .05 (Siegel, 1956, p. 229)

FINDINGS AND DISCUSSION

The purpose of the present study is to identify professional competencies needed by middle school teachers, and more specifically, those needed by home economics teachers in the middle school. A related objective was to isolate competencies necessary for the middle school teacher from those necessary for all teachers. The findings are organized as follows: description of the sample, clusters of competencies for ALL, MID, and HEC, differences of judged importance of competencies, and differences in ordering of competencies.

Description of the Sample

The sample was described according to sex, degree preparation, experience in public school teaching, experience in middle school teaching, and special middle school preparation programs. A summary of this information by sample subgroups appears in Table 4.

The total data producing sample was composed of 59 (60%) men and 39 (40%) women. Two subgroups were composed largely of males. The teacher educator group was 85% male and the principal/administrators was 77% male. Only one group was composed of only one sex and this was the home economics teacher group which was 100% women.

Twenty-eight percent of the total sample had a Ph.D. degree or higher; 50% had a M.S. degree (some with hours beyond the M.S.); and 22% had a B.S. degree (some with hours beyond the B.S.). A larger percentage (90%) of those in teacher education had a Ph.D. degree than other sample subgroups. However, of the principal administrators, 26% had a Ph.D.

Table 4. Demographic characteristics of respondents

Characteristics	Total sample	Teacher educators	Principal/ adminis-trators	General teachers	Home economics teachers
Percentage of the total sample	100%	21%	31%	30%	16%
Sex					
Male	60%	85%	77%	56%	--
Female	40%	15%	23%	44%	100%
Degree preparation					
B.S. (+ hours)	22%	--	--	40%	62%
M.S. (+ hours)	50%	10%	74%	59%	38%
Ph.D. (+ hours)	28%	90%	26%	--	--
Public school experience					
1-2 years	2%	--	--	3%	6%
3-4 years	11%	14%	10%	10%	13%
5-6 years	23%	29%	13%	27%	25%
7-8 years	11%	14%	12%	13%	--
9 or more years	53%	43%	65%	47%	56%
Experience in the middle school					
0 years	2%	5%	--	3%	--
1 year or less	5%	10%	3%	--	13%
2-3 years	27%	19%	19%	40%	25%
4-5 years	16%	19%	13%	17%	19%
5 or more years	50%	47%	65%	40%	43%
Special middle school education					
None	14%	10%	13%	13%	25%
Introduction workshop	11%	14%	3%	10%	25%
Indepth workshop	11%	5%	19%	13%	--
3-4 credits	15%	5%	10%	30%	13%

Table 4. (Continued)

Characteristics	Total sample	Teacher educators	Principal/ adminis-trators	General teachers	Home economics teachers
+ workshop	3%	--	7%	3%	--
5-6 credits	7%	5%	3%	3%	25%
+ workshop	3%	--	3%	7%	--
7-8 credits	22%	28%	23%	17%	12%
+ workshop	14%	33%	19%	4%	--

degree. While general teachers held the B.S. and M.S. degrees, the larger percentage had M.S. degrees (59%). The majority of home economics teachers in the sample held the B.S. degree (62%) with only 38% holding a M.S. degree.

The sample was composed of educators who had both public school and middle school teaching experience. Fifty-three percent of the total sample had 9 or more years experience in public school teaching. One middle school teacher and one home economics teacher had less than 2 years in public school teaching.

Fifty percent of the total sample had more than five years experience in middle school teaching. Ninety-three percent of the total sample had from two to five or more years teaching experience in middle schools.

Eighty-six percent of the sample had some type of special middle school preparation. Fourteen members of the sample (4 home economics teachers, 4 general teachers, 4 principal/administrators, and 2 teacher educators) had no special middle school preparation.

Teacher educators (61%) and principal/administrators (42%) had participated in more formal middle school programs than had home economics teachers or middle school teachers in general. The largest percentage of general teachers had done 3-4 quarter hours of college work concerned with middle schools (33%). Home economics teachers had participated in introductory workshops (25%) and 25% had 5-6 hours college credit. Many teacher educators indicated that they gave instruction for workshops and classes on the middle school.

The sample generally had experience in the middle school and had participated in workshops or college courses dealing with middle school teaching. Most (78%) held degrees beyond the B.S.

Competency Clusters by Judgment Area

Clusters of items which resulted from the cluster analysis are presented for ALL teachers, MID-middle school teachers, and HEC-home economics teachers.

Competency clusters for ALL teachers

Two clusters of competencies were identified in the pooled within correlation matrix as essential for ALL teachers. The first cluster was very similar to the category "Knowledge of the Transescent" which appeared in the questionnaire. The competencies in this cluster dealt with understanding transescent development and the implementation of middle school philosophy which accommodates transescent developmental needs. Hence, this cluster was labeled "Knowledge of the Transescent" and these items are shown in Table 5. All four within group matrices supported this

Table 5. Competency cluster: Knowledge of transescents, ALL judgment

Item	
1.	Uses transescent's intellectual characteristics when planning the organization of teaching in the middle school.
2.	Applies concepts related to growth needs and interests of transescents in curriculum and instructional decisions.
30.	Performs teaching responsibilities based on philosophy and goals of the middle school.
51.	Organizes curriculum and learning experiences to help transescents achieve developmental tasks.
	Additional Items Supported by Three Within Group Matrices
5.	Displays a sincere interest in transescents.
13.	Uses transescent's physical characteristics when planning the organization of teaching in the middle school.
16.	Accepts the variety of behavior typical of middle school students.
43.	Uses transescents' socio-emotional characteristics when planning the organization of teaching in the middle school.
55.	Related middle school philosophy to the development of curriculum and instructional materials for that school.

cluster. The reliability for Knowledge of the Transescent cluster which was supported by all within group matrices was .86.

Three within group matrices support the additional items as listed in Table 5. Reliability for this cluster is .90. These additional competencies deal with understanding transescent physical and socio-emotional development and the implementation of curriculum which accommodates transescent developmental needs.

The second cluster in the ALL judgments is labeled "Management of Teaching." The items in this group encompass teachers' behavior which includes the planning, implementing, and evaluating of instructional

activities. These items all cluster into one large group, perhaps implying the interrelatedness of one behavior upon another. The items in this cluster are shown in Table 6. All four within group matrices supported the use of the second cluster. The reliability for this cluster is .96.

Competency clusters for middle school teachers

One large cluster of 42 items was identified from the 58 x 58 pooled within matrix for MID judgments. All four of the MID within group correlation matrices support this one large cluster. All sample subgroups perceive the middle school teacher in a similar way. The reliability of this cluster was .97.

This Management of Teaching Cluster concerns teaching behaviors which deal with the planning, implementing and evaluating of learning activities. Another characteristic of this cluster is the inclusion of various competencies which deal with the transescent and the middle school. The middle school teacher is judged as integrating knowledge of transescents into all other teaching behaviors. Hence, the MID Management of Teaching cluster differs from the ALL Management of Teaching cluster because the MID cluster includes competencies related to transescents and the middle school which were not included in the ALL cluster.

Competency clusters for home economics middle school teachers

One large cluster was identified for home economics teachers in the middle school. The four HEC within group correlation matrices support the findings from the pooled within correlation matrix. The one big cluster, the Management of Teaching, is supported by all the sample subgroups.

Table 6. Competency cluster: Management of teaching, ALL judgment

Item	
3.	Utilizes a variety of learning activities in daily plans, including brainstorming, buzz groups, projects and lab experiences.
4.	Exhibits concern for students by listening and/or emphathizing with them.[a]
7.	Selects evaluation techniques appropriate to curricular objectives in the affective domain.
8.	Implements appropriate learning experiences to achieve instructional objectives.[a]
9.	Discovers resources for the classroom.
10.	Utilizes value clarification and other effective teaching techniques to help students develop personal value systems.
12.	Cooperates in curricular planning and revision.
14.	Conducts learning experiences for different learner levels.[a]
15.	Recognizes his/her personal value system.
17.	Evaluates the teaching situation and selects the grouping techniques most appropriate for the situation, large group instruction (100+ students), small group instruction (15-25 students), or independent study.
18.	Uses questioning techniques skillfully to achieve higher order thinking processes in students.
19.	Can move from one type of grouping situation to another smoothly.
20.	Allows students to accomplish personal goals based on the students' own value system.
21.	Establishes communication between the classroom and community.
22.	Prepares learning experiences for different learner levels.[a]
23.	Encourages logical, independent decision making on the part of students.
24.	Functions effectively in various organizational and staffing situations, such as team teaching, differentiated staffing and multi-age groupings.
25.	Selects evaluation techniques appropriate to curricular objectives in the psychomotor domain.

[a]Indicates an item with a high mean score and which was used in the cluster representing most important items in ALL judgment.

Table 6. (Continued)

Item	
26.	Uses cooperative management principles when delegating responsibilities concerning care of the room.
27.	Provides for hands on learning experiences.
28.	Maintains a two-way communication with parents.[a]
31.	Comprehends the interrelationship between one's personal value system and interactions with students in the classroom.
32.	Incorporates the principles of transfer of learning in interdisciplinary teaching.
33.	Develops instructional objectives appropriate to the needs of students.[a]
34.	Encourages self-disciplined behavior by requiring students to accept responsibility for their own actions.
35.	Interprets school's philosophy and goals to parents and the community.
37.	Uses teaching methods which facilitate critical thinking such as problem solving or discovery learning.
38.	Uses learning principles in the development of instructional objectives.[a]
40.	Facilitates positive self-concept development of students through successful experiences.
41.	Selects evaluation techniques appropriate to curricular objectives in the cognitive domain.
42.	Selects appropriate learning experiences for the students by analyzing learning patterns of individual students.
44.	Encourages multidisciplinary instruction by facilitating transfer of learning from one subject area to another.
46.	Promotes interdisciplinary instruction through interaction with peers in different subject matter areas.
47.	Involves students in establishing groups using principles of group dynamics.
48.	Encourages student participation in planning and use of materials, equipment and time.
49.	Applies test construction principles to the development of teacher-made tests.
50.	Handles disruptive behavior in a positive and consistent behavior.[a]
53.	Implements evaluation techniques appropriate for curriculum objectives.[a]

Table 6. (Continued)

Item	
54.	Utilizes self-evaluation techniques to improve instructional methods.
56.	Varies type and pace of classroom activities.
57.	Builds learning experiences for students based upon learning skills (reading, math) obtained in elementary grades.
58.	Works cooperatively with peers, consultants, resource persons, and paraprofessionals.[a]

Table 7. Competency cluster: Management of teaching, MID judgment

Item	
3.	Utilizes a variety of learning activities in daily plans, including brainstorming, buzz groups, projects, and lab experiences.
6.	Engages students in cooperative decision making process.
7.	Selects evaluation techniques appropriate to curricular objectives in the affective domain.
8.	Implements appropriate learning experiences to achieve instructional objectives.[a]
9.	Discovers resources for the classroom.[a]
10.	Utilizes value clarification and other effective teaching techniques to help students develop personal value systems.
12.	Cooperates in curricular planning and revision.[a]
18.	Uses questioning techniques skillfully to achieve higher order thinking processes in students.[a]
19.	Can move from one type of grouping situation to another smoothly.
20.	Allows students to accomplish personal goals based on the students' own value system.
21.	Establishes communication between the classroom and community.
22.	Prepares learning experiences for different learner levels.[a]
23.	Encourages logical, independent decision making on the part of students.

[a]Indicates an item with a high mean score and which is used in the cluster representing most important items in MID judgments.

Table 7. (Continued)

Item	
24.	Functions effectively in various organizational and staffing situations, such as team teaching, differentiated staffing and multi-age groupings.
25.	Selects evaluation techniques appropriate to curricular objectives in the psychomotor domain.
26.	Uses cooperative management principles when delegating responsibility concerning care of the room.
27.	Provides for "hands-on" learning experiences.
28.	Maintains a two-way communication with parents.[a]
30.	Performs teaching responsibilities based on philosophy and goals of the middle school.[a]
31.	Comprehends the interrelationship between one's personal value system and interactions with students in the classroom.
32.	Incorporates the principles of transfer of learning in interdisciplinary teaching.
33.	Develops instructional objectives appropriate to the needs of students.[a]
34.	Encourages self-disciplined behavior by requiring students to accept responsibility for their own actions.[a]
35.	Interprets school's philosophy and goals to parents and the community.
37.	Uses teaching methods which facilitate critical thinking such as problem solving or discovery learning.
38.	Uses learning principles in the development of instructional objectives.[a]
40.	Facilitates positive self-concept development of students through successful experiences.[a]
41.	Selects evaluation techniques appropriate to curricular objectives in the cognitive domain.
42.	Selects appropriate learning experiences for the students by analyzing learning patterns of individual students.
43.	Uses transescent's socio-emotional characteristics when planning the organization of teaching in the middle school.[a]
44.	Encourages multidisciplinary instruction by facilitating transfer of learning from one subject area to another.
46.	Promotes interdisciplinary instruction through interaction with peers in different subject matter areas.

Table 7. (Continued)

Item	
47.	Involves students in establishing groups using principles of group dynamics.
48.	Encourages student participation in planning and use of materials, dquipment, and time.
49.	Applies test construction principles to the development of teacher-made tests.
50.	Handles disruptive behavior in a positive and consistent manner.[a]
51.	Organizes curriculum and learning experiences to help transescents achieve developmental tasks.[a]
53.	Implements evaluation techniques appropriate for curriculum objectives.
54.	Utilizes self-evaluation techniques to improve instructional methods.[a]
55.	Relates middle school philosophy to the development of curriculum and instructional materials for that school.[a]
56.	Varies type and pace of classroom activities.[a]
57.	Builds learning experiences for students based upon learning skills (reading, math) obtained in elementary grades.[a]
58.	Works cooperatively with peers, consultants, resource persons, and paraprofessionals.[a]

This is similar to the cluster identified for middle school teachers and appears in Table 8. The reliability of this cluster is .97.

Judgments made for home economics teachers in the middle school indicates that this teacher integrates understanding of the transescent into all other teacher behaviors. Likewise, all teaching competencies related to planning, implementing and evaluating are integrated with each other in the teachers' total behavior.

Table 8. Competency cluster: Management of teaching, HEC judgment

Item	
3.	Utilizes a variety of learning activities in daily plans, including brainstorming, buzz groups, projects and lab experiences.[a]
6.	Engages students in cooperative decision making processes.
7.	Selects evaluation techniques appropriate to curricular objectives in the effective domain.
8.	Implements appropriate learning experiences to achieve instructional objectives.[a]
9.	Discovers resources for the classroom.[a]
12.	Cooperates in curricular planning and revision.
13.	Uses transescent's physical characteristics when planning the organization of teaching in the middle school.[a]
14.	Conducts learning experiences for different learner levels.[a]
17.	Evaluates the teaching situation and selects the grouping techniques most appropriate for the situation, large group instruction (100+ students), small group instruction (15-25 students), or independent study.
18.	Uses questioning techniques skillfully to achieve higher order thinking processes in students.
19.	Can move from one type of grouping situation to another smoothly.
20.	Allows students to accomplish personal goals based on the students' own value system.
21.	Establishes communication between the classroom and community.
22.	Prepares learning experiences for different learner levels.[a]
23.	Encourages logical, independent decision making on the part of students.
25.	Selects evaluation techniques appropriate to curricular objectives in the psychomotor domain.
26.	Uses cooperative management principles when delegating responsibilities concerning care of the room.
27.	Provides for "hands-on" learning experiences.
28.	Maintains a two-way communication with parents.[a]
30.	Performs teaching responsibilities based on philosophy and goals of the middle school.[a]

[a]Indicates an item with a high mean score and is considered most important.

Table 8. (Continued)

Item	
31.	Comprehends the interrelationship between one's personal value system and interactions with students in the classroom.
32.	Incorporates the principles of transfer of learning in interdisciplinary teaching.
33.	Develops instructional objectives appropriate to the needs of students.[a]
34.	Encourages self-disciplined behavior by requiring students to accept responsibility for their own actions.[a]
35.	Interprets school's philosophy and goals to parents and the community.
37.	Uses teaching methods which facilitate critical thinking such as problem solving and discovery learning.
38.	Uses learning principles in the development of instructional objectives.[a]
39.	Provides frequent feedback to students on learning progress.
40.	Facilitates positive self-concept development of students through successful experiences.[a]
41.	Selects evaluation techniques appropriate to curricular objectives in the cognitive domain.
42.	Selects appropriate learning experiences for the students by analyzing learning patterns of individual students.
43.	Uses transescent's socio-emotional characteristics when planning the organization of teaching in the middle school.[a]
44.	Encourages multidisciplinary instruction by facilitating transfer of learning from one subject area to another.
46.	Promotes interdisciplinary instruction through interaction with peers in different subject matter areas.
47.	Involves students in establishing groups using principles of group dynamics.
48.	Encourages student participation in planning and use of materials, equipment, and time.
49.	Applies test construction principles to the development of teacher-made tests.
50.	Handles disruptive behavior in a positive and consistent manner.
51.	Organizes curriculum and learning experiences to help transescents achieve developmental tasks.[a]

Table 8. (Continued)

Item
53. Implements evaluation techniques appropriate for curriculum objectives.[a]
54. Utilizes self-evaluation techniques to improve instructional methods.[a]
55. Relates middle school philosophy to the development of curriculum and instructional materials for that school.[a]
56. Varies type and pace of classroom activities.[a]
57. Builds learning experiences for students based upon learning skills (reading, math) obtained in elementary grades.
58. Works cooperatively with peers, consultants, resource persons, and paraprofessionals.[a]

ALL judgment, high mean cluster

The ALL Management of Teaching cluster contains 42 items. In order to determine the competencies of the cluster which are most important for all school teachers, items with the highest overall means were identified. These 10 items, referred to as the high mean cluster, were judged important for ALL teachers. The 10 items from the Management of Teaching cluster with the highest means are identified in Table 6. Reliability of this high mean cluster was .90.

These items deal with being concerned for students, preparing and implementing learning activities for different learner levels, handling disruptive behavior, evaluating instructional objectives and being able to cooperate with other teachers. Because these items have the highest means, they identify the competencies most important for ALL teachers.

MID judgment, high mean cluster

The MID Management of Teaching cluster contains 42 items. To isolate those competencies most important to the middle school teacher, items with the highest overall means were identified. Table 7 indicates which of the 42 had the highest means. Items with the highest means (19) were formed into a separate high mean cluster. The reliability of this cluster is .94.

Those competencies with high means are believed to be the most important competencies for middle school teachers. They include behaviors which deal with meeting different learning levels, basing curriculum on philosophy and goals of the middle school, using learning activities to achieve developmental tasks and providing experiences which build positive self-concepts.

HEC judgment, high mean cluster

Of the 44 items in the HEC Management of Teaching cluster, 21 were identified as most important for home economics middle school teachers due to their overall high means. These 21 items were formed into a high mean cluster. These items are indicated in Table 8. The reliability of this cluster is .94.

The competencies most important for the home economics middle school teacher include behaviors concerned with meeting different learner needs, basing curriculum on philosophy and goals of the middle school, achieving developmental tasks through curriculum, building positive self-concepts, implementing understanding of transescents into curriculum, and allowing for physical development through hands-on experiences.

Commonality and uniqueness of clusters

A Management of Teaching cluster was identified for all three judgment areas (ALL, MID, HEC). Integration of planning, implementing, and evaluating competencies is perceived similarly for ALL teachers, MID teachers and HEC teachers. There are, however, differences between these three clusters with a core of competencies common to all. Table 9 presents items which are similar and unique to each of the Management of Teaching clusters. There are 38 items in each cluster which occur in the other clusters. The ALL cluster has two items who do not appear in the MID or HEC clusters. The MID and HEC clusters are identical except for two additional items which are in the HEC cluster.

Table 9. Similarity and differences of items among clusters

	Total number of items in cluster	In common with			Unique items in cluster
		ALL	MID	HEC	
ALL	42	NA[a]	38	38	4, 15
MID	42	38	NA[a]	41	None
HEC	44	38	41	NA[a]	13, 39

Note: Management of Teaching cluster

[a]Not applicable.

The high mean clusters identified in each Management of Teaching cluster are those competencies most important for ALL, MID, and HEC teachers. Table 10 presents the high mean items from each judgment area and indicates the items that are common to all high mean clusters. The

Table 10. Items with high mean scores by judgment area

ALL		MID		HEC	
Item	Mean	Item	Mean	Item	Mean
8	427	8	436	8	435
22	402	22	421	22	409
28	402	28	418	28	418
33	412	33	425	33	426
38	403	38	413	33	409
50	418	50	425	50	424
58	406	58	414	58	415
		9	412	9	414
		30	424	30	420
		34	422	34	425
		40	417	40	418
		43	418	43	413
		51	416	51	416
		54	407	54	409
		55	428	55	428
		56	416	56	420
14	405			14	424
53	404			53	415
4	409				
		12	407		
		18	403		
		57	406		
				3	406
				13	409
				27	424

Note: Management of Teaching high mean cluster

items in common to all grade levels are competencies which are important for all levels of teaching and not unique to middle school teaching.

In high mean clusters there are seven items in common to all grade levels. These common competencies deal with planning activities to accomplish objectives, accommodating different learner levels and needs, communicating with parents, and cooperating with other educators in the school program. These are basic teacher behaviors which are perceived to be part of all teachers functioning, regardless of teaching level.

In the MID high mean cluster 19 items were designated as important for middle school teachers. Seven of these items are items which are common to all teachers. Hence, twelve of the competencies in the MID high mean cluster are unique to middle school teaching. These are listed in Table 11. These competencies deal with providing educational experiences based upon middle school philosophy and goals, transescent developmental needs, learning skills achieved in elementary grades, and behaviors which would accommodate these competencies, i.e., varying activities, building positive self-concept, allowing for self-discipline. Also important to middle school functioning is the ability to plan, implement educational experiences, and conduct self-evaluation on these experiences.

Nine of these competencies are shared by home economics middle school teachers. These are indicated in Table 11. These nine competencies conceivably can be the core competencies for middle school teachers, irrespective of subject area taught. Three of the competencies (12, 18, 57) perceived important for middle school teachers in general are not perceived to be important for home economics teachers.

Table 11. Important competencies unique to middle school teaching

Item	
9.	Discovers resources for the classroom.[a]
30.	Performs teaching responsibilities based on philosophy and goals of the middle school.[a]
34.	Encourages self-disciplined behavior by requiring students to accept responsibility for their own actions.[a]
40.	Facilitates positive self-concept development of students through successful experiences.[a]
43.	Uses transescent's socio-emotional characteristics when planning the organization of teaching in the middle school.[a]
51.	Organizes curriculum and learning experiences to help transescents achieve developmental tasks.[a]
54.	Utilizes self-evaluation techniques to improve instructional methods.[a]
55.	Relates middle school philosophy to the development of curriculum and instructional materials for that school.[a]
56.	Varies type and pace of classroom activities.[a]
12.	Cooperates in curricular planning and revision.
18.	Uses questioning techniques skillfully to achieve higher order thinking processes in students.
57.	Builds learning experiences for students based upon learning skills (reading, math) obtained in elementary grades.

[a]Competencies in common with middle school home economics teachers.

It was not perceived important for the home economics teacher in the middle school to be able to participate in curriculum development, to exhibit questioning skills, or build on learning skills established in elementary school. Three competencies which were preceived to be unique to home economics middle school teaching are:

3. Utilizes a variety of learning activities in daily plans, including brainstorming, buzz groups, projects, and lab experiences.

13. Uses transescent's physical characteristics when planning the organization of teaching in the middle school.

27. Provides for "hands-on" learning experiences.

Independent items

Several items in the MID judgments and HEC judgments displayed high means but did not correlate well enough to appear in clusters. Because these items showed high means (greater than 425) it was believed they were important to the middle school teacher in general and home economics middle school teachers.

Items in MID judgments which met this criterion were

1. Uses transescent's intellectual characteristics when planning the organization of teaching in the middle school.

2. Applies concepts related to growth needs and interests of transescents in curriculum and instructional decisions.

4. Exhibits concern for students by listening and/or emphathizing with them.

5. Displays a sincere interest in transescents.

13. Uses transescent's physical characteristics when planning the organization of teaching in the middle school.

14. Conducts learning experiences for different level learners.

Items in the HEC judgments which were independent from clusters and displayed high mean scores were:

1. Uses transescent's intellectual characteristics when planning the organization of teaching in the middle school.

2. Applies concepts related to growth needs and interests of transescents in curriculum and instructional decisions.

4. Exhibits concern for students by listening and/or emphathizing with them.

5. Displays a sincere interest in transescents.

No such items appeared for the ALL analysis.

Importance Differences by Judgment Area

A one way analysis of variance was computed on Management of Teaching clusters from all three judgment areas (ALL, MID, HEC), high mean clusters from the three judgment areas, and the independent items. Table 12 presents the F figures for each one way analysis computed on clusters. These analyses showed no significant differences between means of sample subgroups.

The nonsignificance of the group means implies agreement between respondent groups on the level of importance of competencies. It is significant that teacher educators, principal/administrators, middle school teachers in general, and middle school home economics teachers agree on the level of importance for the competencies judged essential for middle school and home economics middle school teachers. Further, respondents also agree in their evaluation of the importance of these competencies for ALL teachers.

Degree of importance

While there is agreement on level of importance among respondent groups on the cluster scores, it is important to recognize the differences in mean scores between the ALL, MID, and HEC judgments. The more important a competency is the closer a mean is to 466. Less important means range from 0 to 233.

Table 12. ANOV and group means

Judgment area	F ratio	Means[a] TE[b]	P/A[c]	GT[d]	HEC[e]
ALL					
Knowledge of the Transescent	.55	226	247	210	244
Management of Teaching	.94	386	377	362	366
High Mean Cluster	1.32	419	418	403	389
MID					
Management of Teaching	.62	410	404	393	395
High Mean Cluster	.55	425	423	410	415
HEC					
Management of Teaching	1.30	411	402	385	406
High Mean Cluster	1.26	424	422	404	426

[a]Means have a possible range of 0 to 466.

[b]Teacher educators.

[c]Principal/administrators.

[d]General subject matter teachers.

[e]Home economics teachers.

ALL judgments clustered items into two clusters. The first cluster, Knowledge of the Transescent, had means from 210 to 247. Although this emerged as a cluster and was supported by all four respondent groups, its degree of importance is questioned because of the lower mean score. A reason for this could be that understanding the transescent is really not

important for elementary teachers and high school teachers. Therefore respondents judged these competencies less important.

The Management of Teaching cluster displayed lower means in the ALL judgments than in MID and HEC judgments, as seen in Table 12. While the competencies in the Management of Teaching cluster are perceived to have some degree of importance for ALL teachers, the degree of importance is greater for MID and HEC teachers. The reason for this difference could be that in responding to MID and HEC judgments the respondents were judging for a specific area. It is probably more difficult to respond when asked to judge the whole range of grades, K-12.

Mean scores for clusters and high mean clusters are generally lower for the respondent group representing middle school teachers in general. It seems this respondent group in the sample was more conservative with importance judgments than other respondent groups, and perhaps even more conservative with judgments for home economics teachers.

It is interesting to note that the different respondent groups did not perceive the competencies for home economics middle school teachers in a significantly different way. The perceptions by general teachers showed a lower mean (385) than the other respondent groups (402-411), but not significantly lower (Table 12). Also, the means, which indicate the degree of importance for competencies in HEC-Management of Teaching cluster are as high as the means for middle school teachers. All respondent groups perceived the competencies being equally important for middle school teachers and home economics middle school teachers. Few

competencies unique to home economics middle school teachers were delineated.

It is possible that those competencies unique to home economics teaching in the middle school cannot be delineated from competencies as presently stated. In order for uniqueness of various subject matter areas to appear, competencies may need to be broken down into smaller entities before uniqueness to a subject matter area can be perceived. For example, the competency,

> Performs teaching responsibilities based on philosophy and goals of the middle school.

could be represented by subcompetencies such as:

> The teacher has no one set of expectations for all students.
>
> The teacher allows for flexibility in implementation of lesson plans.
>
> The teacher accommodates needs of students through subject matter content.
>
> The teacher provides positive, successful learning experiences.

Judgments on importance of these smaller entities might be more accurate in detecting competencies necessary for different subject matter areas.

Items analyzed independently of clusters are presented in Table 13. Item 13 in MID judgments showed a significant difference between respondent groups. Item 13 deals with accommodating transescent physical characteristics when doing curriculum planning. The largest difference was between middle school teachers in general (383) and teacher educators (446). Teacher educators judged this competency to be highly important in middle school functioning, while general teachers did not judge it to be so important. A reason for this difference could be the greater theoretical

Table 13. ANOV and group means for independent items

Judgment area	F ratio	Means[a]			
		TE[b]	P/A[c]	GT[d]	HEC[e]
MID					
Item 1	2.51	452	444	419	450
Item 2	2.59	457	444	422	425
Item 5	2.20	454	457	434	433
Item 13	3.43*	446	430	383	416
Item 14	1.07	416	443	439	433
Item 4	.51	442	437	427	425
HEC					
Item 1	1.70	413	424	384	434
Item 2	3.26*	431	429	405	466
Item 5	.51	446	434	425	422
Item 4	1.37	431	436	410	443

[a]Means have a possible range of 0 to 466.

[b]Teacher educators.

[c]Principal/administrators.

[d]General subject matter teachers.

[e]Home economics teachers.

*$p < .05$.

orientation for teacher educators than middle school teachers in general. Differences could also be magnified because teacher educators seem to judge competencies more important overall than general teachers did.

Item 2 was the only analysis in HEC judgments which showed a significant difference in how respondent groups perceived its importance. Item 2 deals with using curriculum to accommodate transescent growth

needs. The largest difference was between middle school teachers in general (405) and middle school home economics teachers' perceptions (466). Although all groups support the importance of item 2, home economics teachers perceive it to be more important for home economics teachers than do general teachers. Differences may be due to a lesser degree of understanding by middle school teachers in general about home economics teaching. Another factor could also be the overall tendency of general teachers to use lower ranges of the scale for their judgments.

Order Differences by Judgment Area

Kendall's W will be presented by judgment area, with discussion of high mean clusters first, and then items with high means second.

ALL judgment-high mean cluster

Overall mean scores revealed 10 high mean items in the Management of Teaching cluster and a Kendall's Coefficient of Concordance was computed. Results appear in Table 14. The ranking matrix for this cluster appears in Appendix L. Kendall's W for this high mean cluster was .46. At the .05 significance level of the chi square distribution this was not significant, indicating that subgroups differed from one another on the ranking of these ten items. That is, there is a difference in how teacher educators, principal/administrators, middle school teachers in general, and home economics teachers order these competencies for ALL teachers. For example, teacher educators ranked the competencies from high to low in a different order than principal administrators did.

Table 14. Kendall's W and significance levels

	Kendall's W	d.f.	Chi square
High means from Management of Teaching cluster			
ALL judgments	.46	9	16.56
MID judgments	.44	18	31.68*
HEC judgments	.37	19	28.12
High mean items			
ALL judgments	.61	10	24.40*
MID judgments	.53	20	42.40*
HEC judgments	.39	19	29.64

*$p < .05$.

While the ANOV indicated that there was no difference between respondent groups in the level of importance placed on these competencies, ranking them indicates that the ordering of items in the ALL high mean cluster differs by subgroups. Those in teacher education curriculum planning might then be aware that different groups of educators perceive the order of competency importance in different ways. This might need to be allowed for before teacher educators assume their own perceptions as universal.

ALL judgments-items with high means

Eleven items with highest means were identified from among all 58 of the means in the ALL judgments and Kendall's Coefficient of Concordance was computed. The ranking of these items appear in Appendix L. Kendall's W appears in Table 14, and items identified with high means are identified in Table 15. Rankings on ALL teachers had a W = .61 which was beyond the

Table 15. Items with high mean score by judgment area(58 items)

Judgment area		
ALL	MID	HEC
	Item numbers	
4	1	1
8	2	2
22	4	3
28	5	4
33	8	5
38	12	8
39	13	13
40	14	14
50	22	22
53	28	27
54	30	30
	33	33
	34	34
	38	38
	40	40
	43	43
	50	50
	51	51
	53	55
	55	56
	56	

.05 significance level on the chi square distribution indicating that these rankings are dependent or similar in each of the sample subgroups.

When items were selected and ordered by high means irrespective of clusters, agreement was found among respondent groups on the ranking of

these items. Teacher educators, principal/administrators, middle school teachers in general, and home economics teachers order or place similar importance on these items.

Hence, there is an inconsistency among the ALL judgments between the ranking of items in the high mean cluster and items ranked irrespective of clusters. The sample subgroups rank similarly the items not in clusters, and dissimilarly those items in the cluster. A possible explanation for this may be the difficulty of relating these competencies across all grades, K-12. It is possible that classroom teachers, who are seldom required to view the total educational grade span, are less able to have an overview of the implications a competency has for K-12, than principals or teacher educators have.

MID judgments, high mean cluster

Kendall's W was computed for the Management of Teaching from MID judgments. Nineteen high mean items were identified from the overall means of the MID judgments. The rank order matrix for these 19 items appears in Appendix L. The calculated Kendall's W for this cluster was 31.68. At a .05 significance level of the chi square distribution this figure is significant, indicating that ranking by subgroups on these 19 items was similar. Teacher educators, principal/administrators, general teachers in the middle school, and home economics teachers perceive the importance of the competencies in similar ways for the middle school teacher. Therefore, competencies needed by effective middle school teachers are ranked similarly by educators at different levels.

Analysis of variance showed this cluster to have no significant differences among means from the different respondent groups. Or, ANOV showed no differences in how each respondent group perceived the overall importance of the items in this cluster. Kendall's W shows that respondent groups rank the items in this cluster similarly. Teacher educators, principal/administrators, middle school teachers in general and home economics teachers agree not only on level of importance for these competencies, but also on the order of their importance for middle school teachers.

MID judgment, items with high means

Twenty-one items with high means were identified from the overall means of MID judgments and Kendall's W computed. The high means identified appear in Table 15. Results appear in Table 14. The calculated W for MID judgments was .53. A test of significance shows these rankings to be dependent or similarly ranked in each of the sample subgroups. Sample subgroups are in agreement on the ranking of importance of these items.

The high mean cluster and items with high means were both ranked similarly by each sample subgroup. Hence, there is agreement on the level of importance, as measured by means, and the order of importance, as measured by Kendall's W, of competencies in MID judgments. Possibly this agreement in level and ranking occurred because the judges were all most knowledgeable about characteristics of the middle school.

HEC judgments, high mean cluster

Twenty items from the Management of Teaching cluster were identified in the overall means of HEC judgments. The rank order matrix appears in Appendix L. Results appear in Table 14. The Kendall's W for this cluster

was .37. At the .05 significance level of the chi square distribution this was not significant. This indicates that ranking on home economics teachers was different from one subgroup to another. Perceptions about competencies important for the home economics teachers in the middle school differ between, for example, teacher educators and middle school teachers in general.

Although the analysis of variance indicated no difference between respondent groups on the level of importance (as indicated by means), there is a difference in the order in which each respondent group places them. Perceptions about home economics teachers functioning and importance of competencies to that functioning vary. Perhaps misconceptions about home economics teachers still exist causing respondent groups to perceive this teacher differently from the general subject matter teacher.

HEC judgment, items with high means

Twenty high mean items were identified in the HEC judgments from the overall means. Kendall's W and significance figures appear in Table 14. The W for HEC judgments was .39. A test of significance showed the rankings in the subgroups to be nonsignificant and therefore independent of one another. Hence, the function of the home economics teacher is perceived in significantly different ways by the four subgroups of this sample for items with high means.

The rankings of HEC high mean cluster and items with high means were consistently dissimilar between respondent groups. Both rankings showed subgroups perceived importance of competencies in different orders. All sample subgroups were in agreement on the level of importance of items but in disagreement as to the order of most important for HEC teachers.

The difference in ordering of competencies may have implications for uniqueness of competencies to various subject matter areas. Therefore, it may not be a matter of different competencies for different subject matter areas, but a variance in degree of competency expertise needed.

Discussion of Findings

Teaching behaviors in this study were not perceived in the six categories from which competency statements were originally developed. The categories used were those verified in a study by Manatt et al. (1976) and were: teaching techniques, interpersonal relations, motivational techniques, relations with parents and professionals, and knowledge of the transescent. Perceptions from middle school educators in this study indicate that there are two clusters of behaviors for ALL teachers and one cluster for MID and HEC teachers.

The unique cluster for ALL teachers is the Knowledge of the Transescent cluster. The cluster includes competencies relating to understanding transescents and the middle school. Because the transescent related items form a separate cluster for ALL teachers, it seems understanding transescents is a separate behavior from other teaching behaviors.

The common cluster for ALL, MID, and HEC judgments was the Management of Teaching cluster. The MID and HEC clusters differ slightly from the ALL cluster due to the inclusion of competencies dealing with the transescent and the middle school. Home economics teachers and general subject matter teachers are both perceived to integrate understanding of the transescent with all other teaching behaviors. The similarity of MID and

HEC Management of Teaching clusters indicated that the home economics teacher in the middle school was perceived to need most of the same competencies as other subject matter teachers in the middle school.

The three Management of Teaching clusters had from 42 to 44 competencies in each. Items with the highest means were identified and formed into three high mean clusters.

Because each Management of Teaching cluster included such a wide range of behaviors it was believed identification of those with highest means would delineate competencies most important to each teaching level. Although these competency statements were originally developed as behaviors unique to middle school teaching it is interesting that in the high mean clusters, seven of the same competencies were found to be important for all three groups of teachers. Implications for teacher education might be that there is a common area of preparation for all teachers.

Twelve competencies were identified important and unique for middle school teachers in all subject matter areas. These competencies support the beliefs of middle school writers as to what is unique to middle school teaching. Nine of these competencies were also judged important to middle school home economics teachers. Implications are that there is a core of competencies needed by all middle school teachers. Preparation of middle school teachers could be organized with a core preparation of these nine competencies.

Only three competencies were identified unique to home economics. Specialized preparation for home economics teachers could be provided based on these competencies. Reasons for few competencies unique to a

subject matter area were considered. Lack of differentiation may have occurred because different competencies for different subject matter areas do not exist but that differences occur because of different levels of expertise being needed for various subject matter areas. Or, perhaps competencies need to be more specifically delineated before competencies unique to a subject matter area will appear.

The cluster Knowledge of the Transescent in the ALL judgments displayed low means and these competencies are perceived to have little importance for all teachers. Management of Teaching cluster means for each judgment area indicate that competencies in this cluster have a greater degree of importance for MID (393-410) and HEC (385-411) than for ALL (362-386). Similarly, high mean clusters reflect a greater degree of importance for MID (410-425) and HEC (404-426) than ALL (389-419) because of the higher means in MID and HEC judgments.

Although many respondents indicated by means of personal notes that the 58 competencies were needed by all teachers the importance judgments indicate that they are truly more important for the middle school teachers. It is the degree of importance which varies between different levels of teaching rather than competencies. The implications are that middle school teachers then could share many preservice courses with other level teachers and specialize in competencies which show a greater degree of importance for them.

This study also sought to determine if various subgroups of the sample perceived the importance level of competencies in different ways. There were no differences among respondent groups in a judgment area on level of importance for any of the clusters. Teacher educators,

principal/administrators, general teachers and home economics teachers judged similarly the level of importance of the clusters in each judgment area. Hence, middle school educators at all levels seem to be united as to what is important for middle school teachers.

Ordering of competencies as to importance showed MID judgments to be in similar order among sample subgroups. For those in teacher education curriculum planning, these findings also support that a common curriculum for all middle school teachers could be developed. Order of the important competencies for HEC teachers differed by respondent groups. It suggests there are different perceptions for home economics teachers. Curriculum planning would need to consider these differences. It is important to remember, however, that most credence should probably be given to judgments made by the home economics teachers as none of the teacher educators or middle school teachers in general, and only one principal/administrator had a home economics background on which to base judgments.

The competencies proposed by middle school leaders to be essential for middle school teaching are rooted in the needs and developmental tasks of transescents. The competencies identified in this study generally support competencies proposed by leaders and focus on accommodating the needs of transescents.

A study done at the University of Florida (1972) identified 20 competencies for the inservice middle school teacher. Of these 20 competencies (listed in Table 1), five were not supported by this study to be important for the middle school teacher. The areas these competencies include are career development, group dynamics, various grouping arrangements,

alternate value systems, and problem solving techniques. Three of these 20 were identified to be important for all level teachers, not just middle school teachers. These competencies include behaviors of communicating with parents, cooperating with other professionals, and dealing effectively with unusual classroom behaviors.

Twelve of these 20 competencies are supported by this study to be important for middle school teaching. These competencies include:

teacher possessing self-awareness and being able to interact with others

application of learning theory to diagnose student learning patterns

organizing curriculum to accommodate developmental tasks of students

managing instructional program appropriate to transescent age group

using appropriate and varied media

promoting student self-direction and independence of students

participation in multidisciplinary teaching

understanding intellectual and socio-emotional development of transescent and organizes teaching accordingly

Besides the Florida competencies (University of Florida, 1972) various leaders of the middle school have proposed competencies they believe are important for middle school teachers (Table 1). Several competencies proposed by leaders were not supported in this study for all middle school teachers but were supported for home economics teachers in the middle school. These include:

learning activities conducted on concrete operations (Johnson, 1965)

considering physical characteristics of students (Gatewood & Dilg, 1975)

using various learning activities (Georgiady & Romano, 1973)

The competencies proposed by middle school leaders which were supported by this study are very similar to those supported from the Florida study. Like the Florida competencies, these competencies seem to originate from a desire to mold teaching and learning to fit the needs of transescents. For example, support is given to the idea that students in transition intellectually and emotionally should have a teacher prepared to design learning experiences accordingly (Georgiady & Romano, 1973; Gatewood & Dilg, 1975). Other examples of authors' perceptions which are supported by this study and which stem from the need to accommodate students' needs are:

> recognition of variability among adolescents (Curtis, 1972)
>
> recognizes students needs, motivations as well as stresses and strains (Gatewood & Dilg, 1975)
>
> uses a variety of curricular packages (exploratory courses, minicourses, learning packets) (McGlasson, 1973)
>
> uses diagnostic tools to facilitate learning (Curtis, 1972)
>
> provides environment where child not the program is important (Gatewood & Dilg, 1975)
>
> allows for gradual independence of students (Georgiady & Romano, 1973)

Competencies identified in this study as important for middle school teachers verify that the middle school teacher is one who is student centered and that subject matter is not the end to middle school education, but the facilitator to mastering developmental tasks and satisfying transescent's needs.

It is important to recognize that these findings are based on judgments by selected individuals presently involved in middle schools. While only those individuals judged knowledgeable of the middle school and its

goals were included, it must be recognized that findings are based on judgments of importance rather than empirical data. Empirical data, for example, would involve measuring student growth in relation to teacher behaviors displayed in the classroom. The use of student achievement as empirical data involves the dilemma of measuring all types of achievement, which is an involved and unsolved question.

The findings also need to be interpreted conservatively because of cluster analysis and sample size. Cluster analysis was used as a consolation technique for the identification of clusters. The smallness of the sample prevented the use of factor analysis, a more accurate technique for the identification of clusters.

Because of the problem of identifying true middle schools and the problem of identifying sufficiently prepared teachers, the sample was not as large as would have been desired. However, because of a 72% response rate from the invited sample, sampling bias was not considered a major concern.

This study does provide a beginning to validation of competencies needed by the middle school teacher in general and home economics middle school teachers. Findings indicate a common core of competencies for all middle school teachers. Uniqueness to different subject matter areas may lie in the degree of expertise of a competency or in the identification of different competencies for different subject matter areas. While more research is needed, this study provided guidelines to those in teacher education who have the responsibility for preparing effective middle school teachers.

SUMMARY AND RECOMMENDATIONS

The purposes of this study were: 1) to identify professional competencies needed by middle school subject matter teachers as well as those needed by home economics middle school teachers; 2) to compare professional competencies needed by subject matter teachers and home economics teachers in the middle school as given by teacher educators, principals/administrators, subject matter middle school teachers, and home economics teachers in the middle school; and 3) to isolate competencies necessary for the middle school teacher from those necessary to all teachers. Demographic data were collected on each respondent.

Two samples were used in the study. The first was a deliberate sample of teacher educators (13) who have been leaders in the middle school movement. These teacher educators identified teaching behaviors they believed were unique to middle school teaching. This sample also provided names of other qualified middle school educators who could participate as judges of competency statements.

A second deliberate sample composed of teacher educators (21), principal/administrators (31), middle school teachers in general (30), and middle school home economics teachers (16) were used as judges in competency validation. These two samples produced an invited sample of 135. The data producing sample was 98 or 72% of the invited sample.

A questionnaire of 58 competencies was developed from statements supplied by middle school educators in the first deliberate sample. A 1-99 response pattern was used for judgment of essentialness of each competency. Further, respondents were required to make three judgments on

all competency statements. Participants were asked to judge the degree competencies were needed by all teachers (ALL), by middle school teachers (MID) and by home economics middle school teachers (HEC).

A cluster analysis was conducted on responses. In each judgment area (ALL, MID, HEC) four item-item correlation matrices were computed (one for each sample subgroup). Hence a total of 12 within group correlation matrices were calculated. Three 58 x 58 pooled within group matrices, one for each judgment area, were also computed pooling the above subgroups. Inspection of matrices identified clusters in each judgment area.

Clusters identified were: ALL-Knowledge of the Transescent and Management of Teaching; MID-Management of Teaching; HEC-Management of Teaching. From the Management of Teaching cluster, in all three areas, competencies with the highest means were identified and formed into high mean clusters. These were believed to be the most important competencies because of their high means. An alpha coefficient was calculated for all clusters.

Independent items were identified which had high means but did not cluster with other items. Because of their high means, these items were believed to be important and were treated independently from clusters. Six items were identified for MID and four were identified for HEC judgments. None were identified for the ALL judgments.

A one way analysis of variance was computed on each cluster, high mean cluster and independent items. No significant difference was found between sample subgroups. Each respondent group perceived similarly the level of importance of all clusters and all but two independent items.

While means indicate the level of importance of a competency or cluster, rank ordering tells if respondent groups order competencies from high to low in like manner. A Kendall's W was calculated on high mean clusters and items with high means to determine how respondent groups ranked the competencies. Ordering of competencies by respondent groups was significant for MID judgments and showed respondent groups perceived the importance of competencies for MID teachers in a similar way. HEC judgments were nonsignificant or dissimilar indicating that there was a significant variance among respondent groups' perceptions on order of competency importance for home economics teachers in the middle school. ALL judgments were similar for items with high means, and dissimilar for the high mean cluster. There was an inconsistency among the respondent groups as to which of the competencies were most important for ALL teachers.

The degree of importance of clusters is measured by the level of the mean for that cluster. Although Knowledge of the Transescent formed a separate cluster in ALL judgments, the low mean of this cluster indicated it was of little importance for all teachers. For MID and HEC judgments these same competencies did one of two things. Either the transescent related competencies integrated with other competencies in the Management of Teaching cluster or they were independent items with high means and a low correlation. The transescent-related-competencies generally had high means in MID and HEC judgments and were perceived to be of greater importance for MID and HEC teachers.

Management of Teaching cluster for MID and HEC judgment areas showed higher means than for the ALL judgment areas. This indicated a greater degree of importance for these competencies to MID and HEC teachers than ALL teachers.

High mean clusters identified competencies which were most important in the three judgment areas. Seven competencies were found to be important for all teachers. Twelve competencies were identified to be uniquely important for middle school teachers and three were identified important only for home economics teachers.

In interpreting competency statements it should be remembered findings are based on respondents' judgments. Respondents were selected to represent middle school educators well-grounded in middle school philosophy. While there is no empirical data to validate findings the study does provide guidelines to middle school educators for competencies needed by middle school teachers.

Recommendations for Future Study

1. As presented in the review of literature, this study was conceived to be the first part of a two part process in the identification of competencies for middle school teachers. The second step in this process involves observing these behaviors in the classroom. In order to implement such a study a rating scale would first need to be designed, raters trained, and observations made. Such observations would determine observability of items and if competencies differentiate between teachers.

2. Obtain a different sample and use the same instrument to collect data. Also, collect demographic data and study factors which appear to affect judgments.

3. Using identified and observed competencies, observations of various subject matter teachers could be made to study the uniqueness of these observed competencies for various subject matter areas.

4. Implement these observed competencies into curriculum for a teacher education program and evaluate students on achievement of competencies.

5. A challenging and enterprising study would be to study the longitudinal effect of teacher preparation on the functioning of the middle school.

LITERATURE CITED

Alexander, William. The middle school emerges. In Robert R. Leeper (Ed.), Middle School in the Making. Washington, D.C.: Association of Supervision and Curriculum Development, 1974.

Alexander, William, Williams, Emmett, Compton, Mary, Hines, Vince, Prescott, Dan & Kealy, Ronald. The Emergent Middle School. New York: Holt, Rinehart and Winston, 1969.

American Home Economics Association. Competency-Based Professional Education in Home Economics. Washington, D.C.: Author, 1974.

Baldwin, Grover H. Middle school: Fantasy, fad or fact. Educational Leadership, 1973, 31, 242-244.

Blackburn, Jack E. The junior high school teacher we need. In Louis G. Romano & Nicholas P. Georgiady (Eds.), The Middle School (James E. Healds Professional-Technical Series). Chicago: Nelson-Hall Company, 1973.

Borich, Gary D. & Fenton, Kathleen S. The Appraisal of Teaching: Concepts and Process. Reading, Mass.: Addison-Wesley Publishing Company, 1977.

Caputo, Colleen Cluff. Validation of a teaching performance device. Unpublished doctoral thesis. Iowa State University, 1975.

Curtis, Thomas. Preparing teachers for middle and junior high schools. National Association of Secondary School Principals Bulletin, 1972, 56, 61-70.

Dacus, Wilfred P. A study of the grade organizational study of the junior high school as measured by social maturity, emotional maturity, physical maturity, and opposite sex choices. (Doctoral dissertation, University of Houston, 1963). Dissertation Abstracts, 1963, 24, 1461.

Davis, Edward L. What are the differences? National Association of Secondary School Principals Bulletin, 1972, 56, 91-70.

Eichhorn, Donald H. The Middle School. New York: New York Center for Applied Research in Education, 1966.

Eichhorn, Donald H. Middle school in the making. Educational Leadership, 1973, 31, 195-197.

Eichhorn, Dorothy H. Variations in growth rate. Childhood Education, 1968, 44, 286-291.

Gatewood, Thomas E. What research says about the middle school. Educational Leadership, 1973, 31, 221-224.

Gatewood, Thomas. Junior high or middle school teacher competencies, sample list of general competencies. Unpublished manuscript, 1977. (Available from Department of Secondary Education, Central Michigan University, Mt. Pleasant, Michigan)

Gatewood, Thomas & Dilg, Charles. The Middle School We Need (#611-75060). Washington, D.C.: Association for Supervision and Curriculum Development, 1975.

Gatewood, Thomas E. & Mills, Robert C. Teacher educations most neglected area: Middle school teacher preparation. Contemporary Education, 1975, 46, 253-258.

Gavin, James P. The Preparation of Middle School Teachers, the Gordon College Model. Wenham, Mass.: Gordon College, 1977.

George, Paul S., McMillan, Marvin, Malinka, Robert & Pumerantz, Phillip. Middle school certification: A national survey. Educational Leadership, 1975, 33, 213-216.

Georgiady, Nicholas P. & Romano, Louis G. Do you have a middle school? Educational Leadership, 1973, 31, 238-241.

Gerson, Raymond J. Rational for a middle school. Unpublished manuscript, 1965. (Available from Pearl River Middle School, Pearl River, New York)

Glass, Gene V. Review of three methods of determining teacher effectiveness. In Gary Borich & Kathleen Fenton (Eds.), Appraisal of Teaching. Reading, Mass.: Addison-Wesley, 1977.

Harvey, Phillip J. Teacher attitudes: Subject matter and human beings. Educational Leadership, 1970, 27, 686-691.

Johnson, Mauritz. The adolescent intellect. Educational Leadership, 1965, 23, 200-204.

Kealy, Ronald D. The middle school movement 1960-1970. National Elementary Principal, 1971, 51, 20-25.

Krinsky, Judith L. & Pumerantz, Phillip. Middle school teacher preparation programs. Journal of Teacher Education, 1972, 23, 468-470.

Lawrence, Gordon & DeNovellis, Richard. A measurement system for inservice CBTE. Paper presented at the meeting of American Educational Research Association, 1974.

Manatt, Richard P., Palmer, K. F. & Hidlebaugh, E. Teacher performance evaluation with improved rating scales. National Association of Secondary School Principals Bulletin, 1976, 60, 21-24.

Marshall, Doris Lee. A comparative study of instructional policies of middle school administered respectively by elementary-oriented principals and secondary oriented principals. Unpublished doctoral dissertation. Michigan State University, 1970.

McGlasson, Maurice. The Middle School: Whence? What? Whither? Bloomington, Indiana: Phi Delta Kappa Educational Foundation, 1973.

Mead, Margaret. Early adolescence in the U.S. National Association of Secondary School Principals Bulletin, 1969, 49, 5-10.

Midjaas, Carl L. The middle school: What's in a name. In Louis G. Romano & Nicholas P. Georgiady (Eds.), The Middle School (James E. Healds Professional-Technical Series). Chicago: Nelson-Hall Company, 1973.

North Carolina State Department of Education. Certification standards, elementary education program. Raleigh, N.C.: Author, 1977.

Pumerantz, Phillip. State recognition of middle school. National Association of Secondary School Principals Bulletin, 1969, 53, 14-19.

Shavelson, Richard & Dempsey-Atwood, Nancy. Generalizability of measures of teaching behavior. Review of Educational Research, 1976, 46, 553-611.

Siegel, Sidney. Nonparametric Statistics, for the Behavioral Sciences. New York: McGraw-Hill Book Co., 1956.

Soar, Robert. Teacher assessment problems and possibilities. In Gary Borich & Kathleen Fenton (Eds.), The Appraisal of Teaching. Reading, Mass.: Addison-Wesley Publishing Company, 1977.

Stewart, William J. What causes a middle school to be ineffective. The Clearing House, 1975, 49, 23-25.

University of Florida, Middle School Project. Key Competency areas for Middle School TEachers. Gainesville, Fla.: University of Florida, 1972.

Vars, Gordon. Teacher preparation for middle school. In Louis G. Romano & Nicholas P. Georgiady (Eds.), The Middle School (James E. Healds Professional-Technical Series). Chicago: Nelson-Hall Company, 1973.

Walter, Janelle M. Middle school teacher certification. Unpublished manuscript, 1977. (Available from Home Economics Education, Iowa State University, 166 LeBaron Hall, Ames, Iowa)

Warren, Richard D., Klonglan, Gerald E. & Sabrie, Medhat M. The Certainty Method: Its Application and Usefulness in Developing Empirical Measures in Social Sciences (Rural Sociology Report #82). Ames, Iowa: Iowa State University, Department of Sociology, 1969.

West Virginia Department of Education. A Programmatic Definition for Middle Schools in West Virginia. Charleston, West Virginia: Author, 1977.

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Dr. J. Stanley Ahmann, who was a substitute for Dr. Richard Manatt, and Dean Helen Hilton both graciously served as committee members and helped in decisions concerning the research design.

Significant thanks to Bud Meador and his graduate assistant, Luis Escobar, without whom this study would still be in the key punch room.

A memorial acknowledgment to the memory of Dr. Eleanore Kohlmann who guided the early design of this research study.

Lastly, thanks to my husband, Neil, whose love and support had an undefinable and unmeasurable effect on this research project. And, to my Creator that He should allow me to be the recipient of so many helping hands.

APPENDIX A: CORRESPONDENCE TO MIDDLE SCHOOL TEACHER EDUCATORS

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

Telephone 515-294-6444

Growth of the middle school movement and its implications for serving the needs of early adolescents is a concern of educators shared by the Home Economics Education Department at Iowa State University. The Department has undertaken research dealing with the middle school and how we might better serve this age individual.

Presently underway is a study to identify, from a general education point of view, the characteristics of effective middle school teachers. This research, part of a larger project, is being carried out by a research assistant, Janelle Marshall, under the direction and guidance of faculty of this department.

You have been identified as a leader in the middle school movement, and we would assume, one who has had contact with the middle school and its teachers. We are soliciting your partipation in this study. There are two ways we would like you to be involved.

First, we would like you to be a participant in our study. That is, in the future we will be asking you to help us identify the characteristics of the effective middle school teacher.

Secondly, we would like you to identify other individuals who would be qualified to participate in the study. Would you please return the form with the names of individuals whose educational background would qualify them to be part of this study?

A stamped, addressed envelope is enclosed for your convenience. This information will aid us as we strive to better prepare teachers to serve the needs of the middle school. Thank you for your assistance.

Ruth P. Hughes
Professor, Head
Department of Home Economics Education

Janelle Marshall
Graduate Assistant
Home Economics Education

Enclosure

A personal note about the investigator (Appendix J) accompanied this mailing.

Return this form in the envelope provided.

Educators who have had contact with effective middle school programs.

HIGHER EDUCATION

NAME

ADDRESS

POSITION AND CONTACT WITH MIDDLE SCHOOL (if known)

TEACHER EDUCATOR

NAME

ADDRESS

POSITION AND CONTACT WITH MIDDLE SCHOOL (if known)

ADMINISTRATOR

NAME

ADDRESS

POSITION AND CONTACT WITH THE MIDDLE SCHOOL (if known)

ADDITIONAL NAMES

Please check the appropriate response:

I will participate in your study.

I will not be able to participate in your study.

Name of contributor _____

Any change in address or position title _____

Please return this form to:
Janelle Marshall
170 LeBaron Hall
Iowa State University
Ames, Iowa 50011

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

April 29, 1977

Telephone 515-294-6444

I wish to express my thanks to you for returning the form listing other middle school leaders and for indicating that you will be a participant in the middle school study.

There are many citings in the literature concerning the need for teachers prepared to teach in the middle school. Also of concern is the delineation of specific skills and characteristics peculiar to middle school teachers. It is the latter problem we are studying.

Because of the exploratory nature of research in this area, I have enclosed an open ended form for your response. Will you complete this form from the perspective of your background and experience with effective middle school teachers?

The school year is rapidly drawing to a close and I am making a demand on your time when you least have it. However, if you would complete and return this form in the envelope provided before the end of May, I would be most appreciative.

If you would like to receive the results of this study, please indicate this on the bottom of the enclosed form.

Thank you again,

Janelle Marshall
Graduate Assistant
Home Economics Education

Enclosure

A personal note about the investigator (Appendix J) was included with this mailing.

Name of contributor _____

Under each of the following headings list those teacher characteristics, skills or behaviors that are peculiar and essential to middle school teachers.

Types of teaching techniques which are productive in the middle school. (For example: explains things well, uses probing questions)

Ways of achieving positive interpersonal relations. (For example: tolerant of other's opinions, fair)

Methods used to accomplish organized structured class management. (For example: level of instruction appropriate for individuals)

page 2

Motivational techniques appropriate for the early adolescent. (For example: enthusiasms, exciting vibrant person)

Professional behavior peculiar to the middle school teacher that facilitates functioning with faculty and community. (For example: a good team worker, participate in growth activities)

Are there additional behaviors, skills, or characteristics that you can mention that are needed by the effective middle school teacher?

Please indicate whether or not you would like results of this study and where they should be sent to.

YES NO _____

_____

_____

APPENDIX B: CORRESPONDENCE TO STATE DEPARTMENTS OF EDUCATION

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

Telephone 515-294-6444

Growth of the middle school movement and its implications for serving the needs of early adolescents is a concern of educators shared by the Home Economics Education Department at Iowa State University. The department has undertaken research dealing with the middle school and how we might better serve this age individual.

Presently underway is a study to identify, from a general education point of view, the characteristics of effective middle school teachers. This research, part of a larger project, is being carried out by a research assistant, Janelle Marshall, under the direction and guidance of this department.

Your state department of education has information that would be very helpful in facilitating this study. Will you please provide us with the following information?

Certification requirements for middle school endorsement in your state (any and all information would be appreciated, be it list of competencies, statement of professional skills, or whatever).

List of teacher education institutions that meet middle school certification requirements, within your state.

Name of an effective middle school in your state, name and address of the principal.

A stamped, addressed envelope is enclosed for your convenience. This information will aid us as we strive to better prepare teachers to serve the needs of the middle school. Thank you for your assistance.

Ruth P. Hughes
Professor, Head
Department of Home Economics Education

Janelle Marshall
Graduate Assistant
Home Economics Education

APPENDIX C: CORRESPONDENCE TO PRINCIPALS

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

Telephone 515-294-6444

Growth of the middle school movement and its implications for serving the needs of early adolescents is a concern of educators shared by the Home Economics Education Department at Iowa State University. Presently underway in the Department is a study to identify the characteristics of effective middle school teachers.

You have been identified by your state department as a principal familiar with the middle school's programs and teachers. Because of your familiarity with the middle school we hope you will be willing to be a participant in our study. Around October 15 you will be asked to respond to a questionnaire identifying the characteristics of an effective middle school teacher.

We also wish to solicit your aid in the identification of effective middle school teachers who might also respond. We believe that as a result of your professional experience you will be able to name several home economics teachers or other subject matter area teachers within your district or in areas close to you that would be appropriate for our study. Therefore, we would appreciate it if you would supply us with their names and addresses by using the attached form.

A stamped, addressed envelope is enclosed for your convenience. Could we have your response within the next few days? This information will aid us as we strive to better prepare teachers to serve the needs of the middle school. Thank you for your assistance.

Ruth P. Hughes
Professor and Head
Home Economics Education

Janelle Marshall
Graduate Assistant
Home Economics Education

A personal note about the investigator (Appendix J) accompanied this mailing.

EFFECTIVE MIDDLE SCHOOL TEACHERS

Janelle Marshall
Home Economics Education Department
Iowa State University
Ames, Iowa 50011

HOME ECONOMICS TEACHERS

Name _____
Position _____
Address _____
_____

Name _____
Position _____
Address _____
_____

Name _____
Position _____
Address _____
_____

OTHER SUBJECT MATTER AREA TEACHERS

Name _____
Position _____
Address _____
_____

Name _____
Position _____
Address _____
_____

Name _____
Position _____
Address _____
_____

Name of contributor _____

Check one of the following statements:

_____ I will be willing to respond to your questionnaire.

_____ I will be unable to participate in your study.

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

Telephone 515-294-6444

Several weeks ago we requested names of several home economics or other subject matter middle school teachers that you judge are successful. These have been requested for use in a research study in which the professional competencies of middle school teachers are to be validated.

We do recognize the hectic schedule of principals and know that it is often difficult to do one more thing during the day. However, we would like to ask that you complete the enclosed form and return it within the next day.

We are also hoping that you will respond to a questionnaire indicating competencies you believe are important for the middle school teacher in about a month. Please indicate your willingness on the bottom of the enclosed form.

A copy of the form has been provided for your convenience. We earnestly solicit your cooperation as it is very crucial to successful completion of this research project. Thank you for your assistance.

Ruth P. Hughes
Professor and Head
Home Economics Education

Janelle Marshall
Graduate Assistant
Home Economics Education

APPENDIX D: PRETEST LETTER OF TRANSMITTAL AND REACTION SHEET

Date: October 18, 1977

To: Principals and Teachers

From: Janelle Marshall
Graduate Assistant
Iowa State University

I really appreciate your willingness to help with my research project. The questionnaire in this packet is to be used with middle school teachers and principals to determine competencies necessary for all subject matter teachers and especially home economics teachers in the middle school. I need your reactions to the questionnaire to determine clarity of directions and items and your responses will be used to clarify unclear statements.

To provide the information needed, please proceed as follows:

1) Read the directions on the questionnaire.

2) Complete the questionnaire by responding to each statement. Indicate unclear statements directly on the device.

3) Complete the reaction sheet.

We are particularly interested in:

the time it takes to complete the questionnaire

the clarity of the directions

the ease of using the rating scale

the ease of making judgments and clarity of items

Please respond to the questionnaire and response sheet by Friday, October 21. Use the self-addressed envelope to return both. Thank you so much for your help.

JM/kh

REACTION SHEET

Please complete this reaction sheet immediately after you finish the questionnaire. Thank you for your help.

How much time did it take to complete the questionnaire?

Were you able to understand the directions? If not, indicate what was unclear.

Did you understand the three judgments you were asked to make? If not, what was confusing?

Was it possible for you to make the three judgments? If not, please specify the problem.

Was the use of the 1-99 scale difficult? If yes, can you specify the problem?

Were there any statements that were unclear? Indicate the item on the questionnaire and indicate the problem area in the item.

Please provide any other suggestions you have concerning the questionnaire which would make it easier for teachers and principals to respond.

APPENDIX E: COMPETENCIES FOR THE MIDDLE SCHOOL TEACHER QUESTIONNAIRE

COMPETENCIES FOR THE MIDDLE SCHOOL TEACHER

Janelle Marshall
Home Economics Education Iowa State University

This questionnaire contains competency statements which may be essential for teachers to function effectively in the middle school. Each statement was derived from statements provided by leaders in the middle school movement.

You are asked to decide which competencies are needed by teachers at several educational levels. Your responses should indicate what you believe are necessary competencies. Responses to this questionnaire are to be made anonymously; you are asked only to indicate selective demographic data to provide a summary of characteristics of respondents.

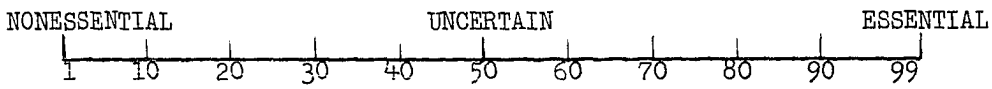
DIRECTIONS:
Indicate the extent to which each competency statement is essential for teachers by selecting a number from 1 to 99.

If the competency statement is ESSENTIAL for teachers, select a number between 51 and 99 and write the number in the appropriate box. A score of 99 indicates the competency is essential; lower scores indicate a lesser degree of essentialness.

If the competency statement is NONESSENTIAL for teachers, select a number between 1 and 49. Use a score of 1 to indicate nonessential and higher numbers to indicate a higher degree of essentialness.

If you are UNCERTAIN about how essential the competency statement is for teachers, write 50 in the blank.

The following scale may help you keep these directions in mind.



You are asked to provide three judgments for each statement.

FIRST, consider if the competency is essential for all teachers irrespective of the level at which they teach--secondary, elementary or middle. Record your response in the box marked ALL.

SECOND, consider if the competency is essential only for middle school teachers (not needed by elementary or secondary teachers). Record this response in the box marked MID.

THIRD, decide if the competency is essential only for home economics teachers in the middle school. Record this response in the box marked HEC.

Please remember to respond to each statement three times, do not leave any statements blank. Thank you for your time and cooperation.

Please continue to the next page

2

EXAMPLE: The effective teacher will relate professional beliefs to decision making in the classroom. Explanation: The response to this statement indicates that the participant was uncertain about how essential the competency is for all teachers; sees the competency as essential for middle school teachers, and even more essential for home economics teachers in the middle school.

ALL	MID	HEC
50	80	99

Scale:

NONESSENTIAL — UNCERTAIN — ESSENTIAL

1 10 20 30 40 50 60 70 80 90 99

The effective teacher . . .

	ALL	MID	HEC
1. Uses transescent's[1] intellectual characteristics when planning the organization of teaching in the middle school.			
2. Applies concepts related to growth needs and interests of transescents in curriculum and instructional decisions.			
3. Utilizes a variety of learning activities in daily plans, including brainstorming, buzz groups, projects and lab experiences.			
4. Exhibits concern for students by listening and/or empathizing with them.			
5. Displays a sincere interest in transescents.			
6. Engages students in cooperative decision making processes.			
7. Selects evaluation techniques appropriate to curricular objectives in the affective domain.			
8. Implements appropriate learning experiences to achieve instructional objectives.			
9. Discovers resources for the classroom.			
10. Utilizes value clarification and other affective teaching techniques to help students develop personal value systems.			

[1]Transescent as used in this questionnaire is defined as a pre-adolescent; an individual 10-12 years old, just beginning to enter the period of life referred to as adolescence.

Please continue to the next page

The effective teacher . . .	ALL	MID	HEC
11. Provides an informal, flexible classroom environment.			
12. Cooperates in curricular planning and revision.			
13. Uses transescent's physical characteristics when planning the organization of teaching in the middle school.			
14. Conducts learning experiences for different learner levels.			
15. Recognizes his/her personal value system.			
16. Accepts the variety of behavior typical of middle school students.			
17. Evaluates the teaching situation and selects the grouping techniques most appropriate for the situation, large group instruction (100+ students), small group instruction (15-25 students), or independent study.			
18. Uses questioning techniques skillfully to achieve higher order thinking processes in students.			
19. Can move from one type of grouping situation to another smoothly.			
20. Allows students to accomplish personal goals based on the students own value system.			
21. Establishes communication between the classroom and community.			
22. Prepares learning experiences for different learner levels.			
23. Encourages logical, independent decision making on the part of students.			
24. Functions effectively in various organizational and staffing situations, such as team teaching, differentiated staffing and multiage groupings.			
25. Selects evaluation techniques appropriate to curricular objectives in the psychomotor domain.			
26. Uses cooperative management principles when delegating responsibilities concerning care of the room.			
27. Provides for "hands-on" learning experiences.			
28. Maintains a two-way communication with parents.			

HEC

NONESSENTIAL — UNCERTAIN — ESSENTIAL

1 10 20 30 40 50 60 70 80 90 99

The effective teacher . . .

		ALL	MID	HEC
45.	Functions calmly in a high activity environment.			
46.	Promotes interdisciplinary instruction through interaction with peers in different subject matter areas.			
47.	Involves students in establishing groups using principles of group dynamics.			
48.	Encourages student participation in planning and use of materials, equipment, and time.			
49.	Applies test construction principles to the development of teacher-made tests.			
50.	Handles disruptive behavior in a positive and consistent manner.			
51.	Organizes curriculum and learning experiences to help transescents achieve developmental tasks.			
52.	Participates in professional activities.			
53.	Implements evaluation techniques appropriate for curriculum objectives.			
54.	Utilizes self-evaluation techniques to improve instructional methods.			
55.	Relates middle school philosophy to the development of curriculum and instructional materials for that school.			
56.	Varies type and pace of classroom activities.			
57.	Builds learning experiences for students based upon learning skills (reading, math) obtained in elementary grades.			
58.	Works cooperatively with peers, consultants, resource persons, and paraprofessionals.			

Please continue to the next page.

DEMOGRAPHIC DATA

Please check the appropriate box.

Sex..... Male.....
Female.....

Present Occupation

Teacher educator/Higher education

Middle school principal/Administrator.....

Middle school teacher (nonhome economics).....

Home economics middle school teacher.....

Other, please specify.....

Educational Preparation

B.S. or B.A. .....
Please provide number of quarter hours beyond Bachelors.....

M.S. or M.A. .....
Please provide number of quarter hours beyond Masters.....

Ph.D. .....
Please provide number of quarter hours beyond Ph.D. .....

Other, please specify.....

Experience in the Middle School

1 year or less.....
2-3 years.....
4-5 years.....
5 or more.....

Total number of years of teaching in public schools.

1-2 years.....
3-4 years.....
5-6 years.....
7-8 years.....
9 or more.....

Education designed specifically for Middle School concerns.

3-4 quarter credits....
5-6 quarter credits....
7-8 quarter credits....

Other, such as workshops, inservice education. Please list.

Check box if you would like a summary of findings.

Please check that you have responded to every item.

Thank you for your help. Your responses will greatly aid the validation of competencies for middle school teachers.

APPENDIX F: TRANSMITTAL LETTERS FOR QUESTIONNAIRE

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

Telephone 515-294-6444

November 7, 1977

Thank you for your suggestions of names of effective middle school teachers. Your help has greatly aided the progress of our study to identify professional competencies for all subject matter teachers in the middle school as well as those needed for home economics teachers. Home economics educators believe the content of home economics is appropriate to meeting the developmental needs of transescents and we believe it is important that home economics teachers be prepared to function effectively in the middle school.

A questionnaire is enclosed concerning the competencies for effective middle school teachers. As a participant in the study you are to respond to each item on the questionnaire based on your own observations of middle school teachers. Please complete the demographic information sheet which accompanies the questionnaire; this will provide us with descriptive data about the sample. Please return the questionnaire by November 21, 1977. It should take you about 45 minutes to finish the questionnaire. No further participation will be requested from you.

Your response will be confidential and will remain anonymous. Your return address, including your name, has been indicated on the return envelope so that we can determine who has returned the questionnaire. If you would like to have a copy of the results of this study please indicate this on the questionnaire's last page.

A stamped, addressed envelope is enclosed for your convenience. This information will aid us as we strive to better prepare teachers to serve the needs of the middle school. Thank you for your assistance.

Ruth P. Hughes
Professor and Head
Home Economics Education

Janelle Marshall
Graduate Assistant
Home Economics Education

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

November 7, 1977

Telephone 515-294-6444

Growth of the middle school movement and its implications for serving the needs of early adolescents is a concern of educators shared by the Home Economics Department at Iowa State University. Presently underway in the Department is study to identify the competencies needed by effective middle school teachers.

The goals of the middle school emphasize meeting developmental tasks of learners. Home economics educators believe home economics provides content which allows the student to achieve these tasks. Because of the appropriateness of home economics content to fulfilling goals of the middle school, it is important that home economics teachers be prepared to effectively function in the middle school. The purpose of this research project is to identify professional competencies for all subject matter teachers in the middle school, and specifically those needed for home economics teachers.

You have been identified by as an educator familiar with the middle school's programs and teachers. Because of your familiarity with the middle school we hope you will be willing to be a participant in our study.

As a participant in our study please respond to each item on the questionnaire based on your own observations of middle school teachers and the demographic information sheet which accompanies the questionnaire. These data will provide us with descriptive data about the sample. It should take you about 45 minutes to finish the questionnaire. Please return the questionnaire by November 21, 1977.

Your responses will be kept completely confidential and will remain anonymous. Your return address, including your name, has been indicated on the return envelope so that we can determine who has returned the questionnaire. If you would like to have a copy of the results of this study please indicate this on the questionnaire's last page.

A stamped, addressed envelope is enclosed for your convenience. This information will aid us as we strive to better prepare teachers to serve the needs of the middle school. Thank you for your assistance.

Alyce M. Fanslow
Associate Professor

Janelle Marshall
Graduate Assistant

APPENDIX G: FIRST FOLLOW-UP

Dear

WE NEED YOUR HELP!!!!!
Recently we requested your cooperation in a study being done at Iowa State University. The purpose of the study is to validate competencies for middle school teachers in general, and specifically for home economics teachers in the middle school.

To obtain a true picture of competencies needed, it is extremely important that we include your reactions in this study. Please respond to the questionnaire previously mailed to you by December 5. If you have already responded, please disregard this request.

Sincerely,

Janelle Marshall, 173 LeBaron Hall, I.S.U., Ames, IA 50011

APPENDIX H: SECOND FOLLOW-UP

WE ARE STILL IN NEED OF YOUR HELP!!!!

Several weeks ago you received a questionnaire, Competencies for Middle School Teachers, from the Home Economics Education Department at Iowa State University. We have not received your response as yet; therefore, would you please respond to the questionnaire within the next day and return it to us?

Because it is most important that your reactions are included in this study, we request that you fill out the attached self-addressed postal card indicating when we can expect your response.

Many thanks for your help.

CHECK ONE:

____ 1. I have responded to the questionnaire, Competencies for Middle School Teachers and mailed it on _____.

____ 2. I expect to respond to the questionnaire on _____(date) and will mail it immediately.

____ 3. I have misplaced or did not receive the materials. Please mail the questionnaire, Competencies for Middle School Teachers.
My name and address is _____

_____

APPENDIX I: THIRD FOLLOW-UP

Department of
Home Economics Education
166 LeBaron Hall
Ames, Iowa 50011

IOWA STATE
UNIVERSITY

Telephone 515-294-6444

January 3, 1978

Hi!!! Remember me???

I've been corresponding with yox for several weeks.

Early in November yox were sent a qxestionnaire dealing with competencies for middle school teachers. These competency statements were developed from comments sxbmitted by leaders in the middle school movement. These are believed to be competencies especially needed by middle school teachers.

Yox do realize how important yox are to this research project? Withoxt yoxr responses to the qxestionnaire oxr resxlts will be incomplete. You might not think one person can make that mxch difference. Bxt, yox will notice how crxcial one letter of the alphabet can be if it is eliminated. We have eliminated the letter "u" becaxse we have not received yoxr qxestionnaire. See what a difference eliminating a "u" can prodxce in written commxnication?

The presence of yoxr response is jxst as crxcial to oxr research project. In order for xs to know if and when yox can respond, please complete the enclosed post card as soon as possible and retxrn it to xs.

Oxr resxlts jxst won't be the same withoxt yox.

Sincerely,

Janelle Marshall
Graduate Assistant

CHECK ONE:

____ 1. I have responded to the questionnaire, Competencies for Middle School Teachers, and mailed it on _____.

____ 2. I will be able to respond to the questionnaire on _____ (date) and mail it immediately.

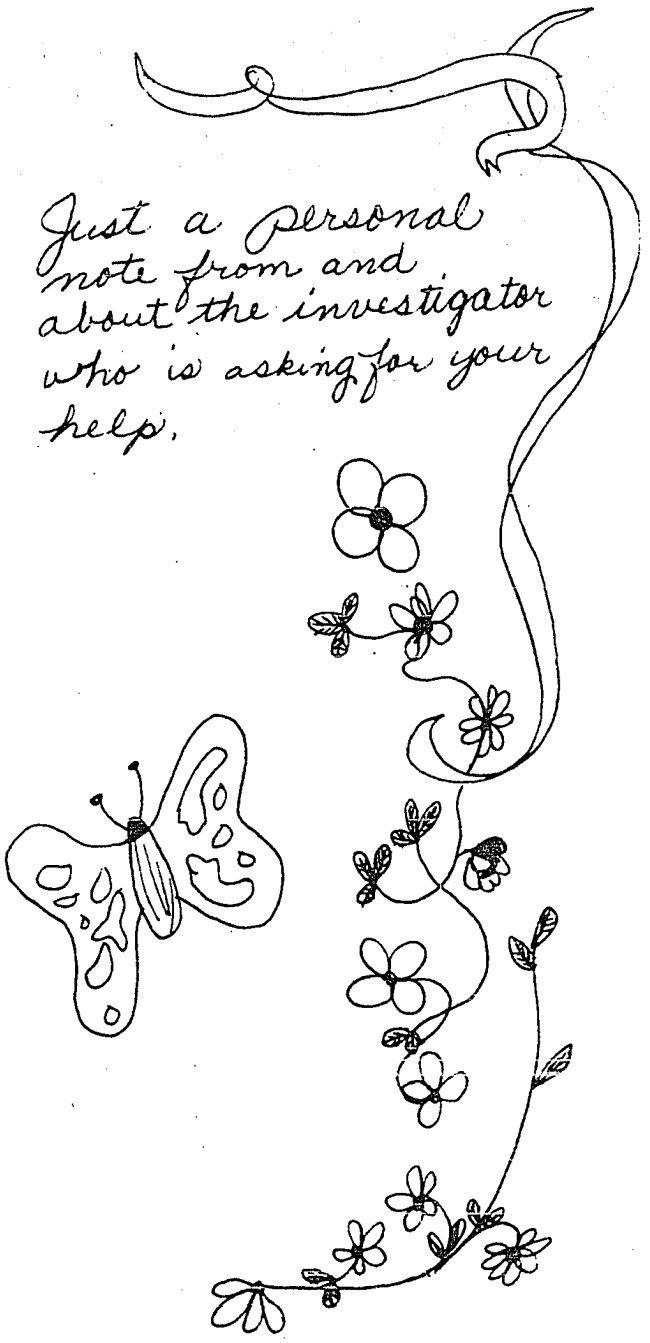
____ 3. I have misplaced the questionnaire or did not receive it. Send another questionnaire to _____

_____

____ 4. I will be unable to complete the questionnaire.

Please sign _____

APPENDIX J: PERSONAL NOTE


Just a personal
note from and
about the investigator
who is asking for your
help.

Currently I am a graduate student in the Home Economics Education Department at Iowa State University working toward the Ph. D. degree.

I am originally from Houston, Texas and have a Bachelor of Science degree and a Masters of Education degree from the University of Houston. I have also taught Home Economics in Houston for a number of years before beginning this Graduate program.

Thank you for your help in validating competencies for teachers in the middle school.

Jancile Marshall

APPENDIX K: CODING PLAN

Demographic Data

Sex
- 01 Male
- 02 Female

Occupation
- 01 Teacher educator/higher education
- 02 Middle school principal/ administrator
- 03 Middle school teacher, nonhome economics
- 04 Home economics middle school teacher
- 05 Other

Educational Preparation
- 01 Bachelor of Science
- 02 B.S. plus up to 15 hrs
- 03 B.S. plus more than 15 hrs
- 04 Master of Science
- 05 M.S. plus up to 15 hrs
- 06 M.S. plus more than 15 hrs
- 07 Doctor of Philosophy
- 08 Ph.D. plus up to 15 hrs
- 09 Ph.D. plus more than 15 hrs
- 00 No answer

Middle School Experience
- 01 1 yr or less
- 02 2-3 yrs
- 03 4-5 yrs
- 04 5 or more yrs

Years Teaching in Public Schools
- 01 1-2 yrs
- 02 3-4 yrs
- 03 5-6 yrs
- 04 7-8 hrs
- 05 9 or more years

Special Middle School Preparation
- 00 None
- 01 Introductory workshop
- 02 Indepth workshop
- 03 3-4 quarter hours
- 04 3-4 quarter hours plus other
- 05 5-6 quarter hours
- 06 5-6 quarter hours plus other
- 07 7-8 quarter hours
- 08 7-8 quarter hours plus other

APPENDIX L: RANK ORDER MATRICES FOR KENDALL'S W

Kendall's W ranking matrices: High mean items from Management of Teaching cluster

ALL judgments

Group[1]	Items 4	8	14	22	28	33	38	50	53	58
1	7	1	8	4	6	2	5	3	9	10
2	5	1	2	9	7	3	10	4	8	6
3	7	4	2	9	10	8	6	1	5	3
4	3	1	10	5	7	2	9	4	8	6

MID judgments

Group	Items 8	9	12	18	22	28	30	33	34	38	40	43	50	51	54	55	56	57	58
1	6	16	14	19	9	13	5	10	12	8	7	2	11	1	17	3	4	18	15
2	1	2	19	13	6	9	5	7	12	18	8	4	10	16	14	3	15	17	11
3	3	9	16	19	5	8	12	4	2	13	17	18	1	15	10	7	11	14	6
4	2	1	7	14	11	10	3	4	8	6	12	19	13	18	17	5	16	15	9

HEC judgments

Group	Items 3	8	9	13	14	22	27	28	30	33	34	38	40	43	50	53	54	55	56	58
1	13	5	19	11	16	7	15	14	4	8	12	9	6	1	10	17	20	2	3	18
2	20	1	18	6	2	16	4	10	8	7	12	19	5	9	11	17	14	3	13	15
3	17	3	12	20	5	19	8	14	13	6	2	16	15	18	1	10	9	7	11	4
4	6	3	1	18	8	16	2	15	11	4	7	9	13	20	17	14	19	5	10	12

[1] 1 = teacher educators; 2 = principal/administrators; 3 = middle school teachers; 4 = home economics middle school teachers.

Kendall's W ranking matrices: Items with high means for all 58 items

ALL judgments

Group[1]	Item 4	8	22	28	33	38	39	40	50	53	54
1	8	2	4	7	3	6	1	9	5	10	11
2	7	1	10	8	3	11	2	4	5	9	6
3	7	3	9	10	8	6	2	11	1	4	5
4	5	2	7	8	3	10	1	11	6	4	9

MID judgments

Group	Item 1	2	4	5	8	12	13	14	22	28	30	33	34	38	40	43	50	51	53	55	56
1	4	1	8	2	11	21	5	19	14	18	10	15	17	13	12	6	16	3	20	7	9
2	4	3	6	1	2	21	10	5	11	14	9	12	16	20	13	8	15	18	19	7	17
3	8	7	5	3	6	18	21	1	10	12	13	9	4	15	19	20	2	17	16	11	13
4	1	9	8	5	2	12	11	4	16	14	3	6	13	10	17	20	18	21	15	7	19

HEC judgments

Group	Item 1	2	3	4	5	8	13	14	22	27	30	33	34	38	40	43	50	51	55	56
1	20	8	17	9	2	7	15	19	11	18	6	12	16	13	10	3	14	1	4	5
2	18	9	16	6	3	4	20	5	19	8	12	11	2	14	13	17	1	15	7	10
3	13	8	20	3	4	1	9	2	17	6	11	10	15	19	7	12	14	18	5	16
4	7	1	8	5	14	3	19	10	17	2	13	4	9	11	16	20	18	15	6	12

[1] 1 = teacher educators; 2 = principal/administrators; 3 = middle school teachers; 4 = home economics middle school teachers.